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The purpose of this study was to discover whether job seekers can be expected to act on the basis of new knowledge about the local labor market, and if they do act, whether their probability of success in finding a job is increased. This supplementary labor market information experiment was conducted in a single employment service office and included 777 male registrants: 390 in the experimental group, 387 in the control group. Twenty-seven percent of the participants were Negro, 80 percent were between 20 and 50 years of age, 46 percent had 12 or more years of education, and 48 percent had three or more dependents. The findings include: (1) The level of search activity for participants of the experimental group was 40 percent higher than the control group, (2) Negro recipients of supplemental information were significantly more successful in finding jobs during the 8-week study period than were Negro participants in the control group, and (3) The receipt of supplemental information did not significantly affect the length of time that the participants were unemployed after registering with the employment service. (CH)

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U. S. DEPARTMENT OF LABOR
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INSTI~~TUTE~~ FOR RESEARCH ON HUMAN RESOURCES.
THE 3 PENNSYLVANIA STATE UNIV~~ERSITY~~, University Park.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Final Report
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by

David W. Stevens

August 1968

INSTITUTE FOR RESEARCH ON HUMAN RESOURCES
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FOREWORD

During the last third of the Twentieth Century American society will be confronted with many major domestic issues. One is a recognition that the resources available to government will be considerably less than those required to raise the standard of living in a quantity, as well as quality, sense. This will call for a determination of priorities which in turn call for a reexamination of the effectiveness of programs designed to achieve their objectives.

A second major issue is a reexamination of the effectiveness of existing institutions to achieve the objectives set forth in public policies. Many of these institutions were established in the second third of the Twentieth Century and it is asserted by many persons that they may no longer be applicable to the problems of the last third of the Twentieth Century.

Because of this crunch between needs and resources and the questioning of the effectiveness of existing institutions, it is necessary to explore new approaches to the solutions of problems. And this is a third major issue.

It was within this framework that the Institute for Research on Human Resources was established at The Pennsylvania State University in late 1964. And it is within this framework that the study of the role that labor market information can play in a more effective job-search on the part of the unemployed was intended.

Although this study is only a slice of the larger problem of assisting the unemployed to obtain jobs, it is increasingly clear that only by conducting controlled experiments can we obtain correct answers. Too often in the past broad and uncontrolled research has led us down the wrong path. It is better to obtain certain answers to narrow, specific questions than uncertain answers to broad, general questions.

One institution which has been subject to frequent evaluation is the U.S. Employment Service. Born in the 1930's, it was confronted with problems of "mass" unemployment. In the 1960's it has become more and more involved in problems of "class unemployment." The U.S. Employment Service and others are constantly seeking new ways of meeting these new problems.

It is hoped that this study, in part, can assist in the development of new approaches. It raises a number of questions, which should be subject to further research, and a number of issues concerning the activities of the U.S. Employment Service.

Jacob J. Kaufman
Project Director

PREFACE

It is impossible to identify individually each person who contributed to the design and conduct of the experimental program described in the following pages. However, the following individuals must be singled out for a word of appreciation.

Howard Rosen, Director, and Robert Manifold, of the Office of Manpower Research; John Y. First, Assistant Executive Director of the Pennsylvania Bureau of Employment Security; George S. McGill, Manager, Pittsburgh District, Pennsylvania State Employment Service; and, Oliver L. Girdwood, Manager, Pittsburgh Industrial Office, Pennsylvania State Employment Service, provided the administrative direction necessary to carry out the experimental project. Each of the above named persons also made significant substantive contributions to the design and conduct of the program.

Five people in the Pittsburgh Industrial Office were assigned full-time to the project for a period of approximately nine months. Each contributed to the successful conduct of the experimental program itself, and special appreciation is therefore extended to F. Maxwell Thompson, who acted as project coordinator in the local office; Rose Faetini, Rosemary Edelman, and Dean Roberts, who interviewed all of the participants who were given supplemental labor market information; and Mary Harris, who acted as project secretary and also coordinated the follow-up activities. Two other people in this local office also deserve special mention for

performing project duties in addition to their normal functions. They are Dorothy Graves, Manager of the Applicant Services Unit, and Selma Klein, Receptionist in the Applicant Services Unit.

Called upon as consultants at various stages of the project were Herbert Chesler, Associate Professor of Economics, University of Pittsburgh, and Myron L. Joseph, Head, Department of Administration and Management Science, Carnegie-Mellon University.

Louis Levine, Professor of Economics, The Pennsylvania State University; Leon Lewis, Chief, Branch of Occupational Analysis, U.S. Employment Service; and Arthur Schwartz, State Supervisor of Employment Testing, Pennsylvania State Employment Service, were kind enough to lend their expertise to the solution of numerous methodological and operational problems.

Special thanks are extended to those who read a preliminary version of this report.

As with all research conducted at academic institutions, graduate research assistants performed yoeman service with little recognition. These unenviable roles were fulfilled by Freeman Hudson, Louis Silversin, and Arthur Weinberg. Mr. Silversin carried out all of the computer analysis and was an effective critic during the crucial analytical stage of the project, for which I am especially grateful.

The dedication and efficiency of the secretarial staff of the Institute for Research on Human Resources rose to their normal high crisis level in producing this report.

Finally, thanks are extended to the Project Director, Jacob J. Kaufman, for providing substantive and procedural guidance in all phases of the project.

University Park, Pennsylvania
August 1968

David W. Stevens

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CHAPTER 1

LABOR MARKET INFORMATION AND THE SEARCH FOR WORK

INTRODUCTION

Does limited information about possible employment opportunities act as an important constraint on the effectiveness of independent job-search activity? If so, can this barrier to successful placement be removed by broadening the job seeker's knowledge about which firms in the local labor market employ workers with his attributes?

The authors of a recent local labor market study[1] concluded that the answer to the first question is yes, limited knowledge does act as a significant constraint on successful job-search. The purpose here is to report on the design, conduct, and evaluation of an experimental program which was introduced to see whether this constraint can be removed by providing a job seeker with information about selected firms in a local labor market.

---

[1] Harold L. Sheppard and A. Harvey Belitsky, The Job Hunt: Job-Seeking Behavior of Unemployed Workers in a Local Economy, a report for the Office of Manpower, Automation and Training, U.S. Department of Labor, September 1965, subsequently published as The Job Hunt by the Johns Hopkins Press, 1966.

Section I of this chapter presents a tabular survey of previous empirical work on job-search activity. Section II introduces the supplemental labor market information (SLMI) program which was designed and conducted specifically to answer the question set forth above. Finally, Section III outlines the format of the report itself, so that readers with limited time or selected interests can effectively use the study.

I

FORMAL AND INFORMAL SEARCH TECHNIQUES

Reference is frequently made to labor market 'channels'. Formal channels include public and private employment agencies, union hiring halls, social service agencies, placement units in educational institutions and newspaper advertisements. The informal channels include reliance on friends or relatives, and direct application to employers without prior knowledge of openings.

Virtually every study which has presented data on the techniques or channels through which workers secured jobs has shown that the majority used informal channels, primarily information obtained from friends or relatives.[1]

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[1] Three previous surveys of this literature are: Herbert S. Parnes, Research on Labor Mobility: An Appraisal of Research Findings in the United States, Social Science Research Council, New York, Bulletin 65, 1954, pp. 162-171, especially Table 6 on pp. 164-165 which summarizes data from six studies; William Haber, Louis A. Ferman, and James R. Hudson, The Impact of Technological Change, The W.E. Upjohn Institute

The diversity of actual experience in different local labor markets is exemplified by the data presented in Table 1.

Unfortunately it is impossible to determine from this wealth of information how much of the observed diversity is due to the complexity of the search process itself, and how much is contributed by differences in the personal and environmental factors found among the study populations and local labor market areas. This, of course, limits the degree of understanding which can be gained about the labor market mechanism from such descriptive presentations.

The potential diversity of circumstances among job seekers in a single local labor market, for instance, is indicated by the complex classification of labor supply shown in Table 2. A job seeker may be presently employed, have been employed immediately prior to the present period, have been unemployed for an extended period, or never have held a job. The job seeker may want to start immediately or wait for some time before beginning work. If he is currently employed he may be looking for an additional job or may want to change jobs.

Similarly, labor market studies have been conducted under demand conditions ranging from local depression in a weak national economy, through combinations of local depression-national expansion and local expansion-national depression, to favorable demand conditions at both the local and national levels.

---

[1] for Employment Research, Kalamazoo, Michigan, September 1963, pp. 29-32 and the Appendix where 17 studies are surveyed; and Melvin Lurie and Elton Rayack, "Racial Differences in Job-Search Behavior: A Case Study," The Southern Economic Journal, Vol. 33 (July 1966), in which Table A, p. 94 summarizes nine studies. The format for Table 1 in the present report is a slight modification of that used by Lurie and Rayack.

TABLE 1: SURVEY OF STUDIES INDICATING WHICH INFORMATION CHANNELS WERE SUCCESSFULLY USED BY JOB SEEKERS.

Author(s)[1]	Date of Study	Labor Market Area	Size of[2] Population	CHANNELS*										
				FORMAL						INFORMAL				
				1	2	3	4	5	6	7	8	9	10	1-10
				%	%	%	%	%	%	%	%	%	%	%
1. Adams-Aronson	1949-50	Auburn, N.Y.		2	-	-	-	-	-	22	52	12	12	100
2. Belzung-Owen-MacNaughton	1962-63	Baytown, Tex.	245	-	-	8	6	9	-	27	39	-	11	100
3. deSchweinitz	1930	Philadelphia, Pa.		-	2	3	-	-	-	58	23	-	14	100
4. Ferman	1963	Detroit, Mich.	185	1	1	1	40	16	-	9	27	-	5	100
5. Heneman-Fox-Yoder	1947-48	Minneapolis, Minn.		6	5	14	7	-	-	30	32	-	6	100
6. Kaufman-Schaefer-et al.[3]	1965	(nine cities)		7		5	-	-	23	26	34	-	5	100
7. Lurie-Rayack	1964	Middletown, Conn.		2	10	3	4	-	-	36	45	-	-	100
8. MacQuown	1966		8,658	4	23	11	-	-	-	12	37	-	13	100
9. Miernyk	1951-53	Lowell, Mass.		9	-	9	2	-	-	36	35	-	9	100
		Lawrence, Mass.		3	-	7	1	-	-	50	35	-	4	100
		Fall River, Mass.		5	-	3	1	-	-	59	29	1	2	100
		New Bedford, Mass.		3	-	-	3	-	-	39	42	11	2	100
		Providence, R.I.		3	-	7	3	-	-	32	42	-	13	100
10. Myers-Schultz	1948-49	Nashua, N.H.		5	-	3	3	-	-	38	16	33	2	100
11. Myers-Maclaurin	1937-40	Fitchburg, Mass.		1	1	2	-	-	-	39	33	22	2	100
12. Reynolds[4]	1947	(factory city)	350	13	-	5	1	-	-	27	42	8	4	100
13. Reynolds-Shister[5]	1947	New Haven, Conn.	450	13	-	13	5	-	-	28	20	13	8	100
14. Sheppard-Belitsky[6]	1966	Erie, Pa.	136	14	-	4	5	-	-	56	-	14	7	100
15. Sheppard-Ferman-Faber	1957-58	Detroit, Mich.	116	5	-	3	-	-	-	34	30	22	6	100
16. Ullman-Taylor[7]	1961-63	Chicago, Ill.	354	3	10	14	-	-	18	37	9	8	1	100
17. Wilcock-Franke	1960-62	Columbus, Ohio		4	-	-	-	12	-	37	32	-	15	100
		Oklahoma City, Okla.		4	-	-	-	3	-	33	40	-	20	100
		E.St. Louis, Ill.		3	-	-	-	7	-	53	22	-	15	100
		Peoria, Ill.		5	-	-	-	5	-	43	31	-	16	100
		Fargo, N.D.		9	-	-	-	7	-	31	35	-	18	100
18. Wilcock-Sobel	1952	Kankakee, Ill.		8	-	19	-	-	-	46	23	3	1	100
19. Minnesota B.E.S.	1966	St. Paul, Minn.	3,735	9	6	9	7	-	7	36	24	-	2	100
20. St. Paul, Minnesota B.E.S.	1965	St. Paul, Minn.	5,700	8	6	8	6	-	6	32	22	-	12	100
21. Ohio B.U.C.	1962-63	(six cities)	1,430	8	7	14	6	-	-	24	30	-	11	100
22. U.S.E.S.	1958-62	(eight cities)		16	4	11	-	-	-	23	36	-	10	100

*CHANNEL CODES: 1) Public Employment Agency, 2) Private Employment Agency, 3) Newspaper Advertisements, 4) Union, 5) Employer Assistance, 6) Educational Institution Placement Bureau, 7) Friends and Relatives, 8) Direct Application Without Prior Knowledge of Openings, 9) Recall to Previous Job, and 10) Other, and Not Known.

Footnotes--Table 1

1. A complete list of sources follows these footnotes.
2. In many cases the size of the study population, upon which the percentage distribution is based, is not given.
3. Male graduates of vocational curriculum only.
4. Manufacturing sample.
5. Manual labor sample.
6. Recalls were excluded from study population.
7. Keypunch operators only.

Sources--Table 1

Leonard P. Adams and Robert L. Aronson, Workers and Industrial Change: A Case Study of Labor Mobility, Cornell Studies in Industrial and Labor Relations, No. VIII, Ithaca, New York: Cornell University Press, 1957.

L. D. Belzung, John P. Owen, and John F. MacNaughton, The Anatomy of a Workforce Reduction, Center for Research in Business and Economics, College of Business Administration, University of Houston, 1966.

Dorthea deSchweinitz, How Workers Find Jobs, Philadelphia: University of Pennsylvania Press, 1932.

Louis A. Ferman, Death of a Newspaper: The Story of the Detroit Times - A Study of Job Dislocation Among Newspaper Workers in a Depressed Labor Market, Kalamazoo, Michigan: The W. E. Upjohn Institute for Employment Research, 1963.

H. G. Heneman, Harland Fox, and Dale Yoder, Minnesota Manpower Mobilities, University of Minnesota, 1950.

Jacob J. Kaufman, et al., The Role of the Secondary Schools in the Preparation of Youth for Employment, Institute for Research on Human Resources, The Pennsylvania State University, February 1967.

Melvin Lurie and Elton Rayack, "Racial Differences in Migration and Job-Search: A Case Study," The Southern Economic Journal, Vol. 33 (July 1966), pp.81-95.

Richard S. MacQuown, statement printed in Manpower Services Act of 1966 and Employment Service Act of 1966, Joint Hearnigs before the Subcommittee on Employment and Manpower of the Senate Committee on Labor and Public Welfare, and the Select Subcommittee on Labor of the House Committee on Education and Labor, Washington, GPO, 1966, p. 332; data from National Employment Association study January 1966, and from the following studies by state BES agencies conducted between 1958 and 1962, cited in "Employment Service Participation in the Labor Market," Readings on Public Employment Services, GPO, December 1964, p. 491:

"A Study of Community and Worker Adjustments to Factory Layoffs, Lincoln, Nebraska," Nebraska Department of Labor, Division of Employment Security, Lincoln, Nebraska, November 1958.

"An Analysis of the Worker Recruitment Methods in the Albuquerque Area," New Mexico State Employment Service, Albuquerque Area Skill and Training Survey, September 1959.

"A Study of Hiring Channels, Fargo, North Dakota," North Dakota State Employment Service, Bismarck, North Dakota, May 1962.

"A Study of Hiring Channels, Grand Forks, North Dakota," North Dakota State Employment Service, Bismarck, North Dakota, November 1961.

"A Study of Hiring Channels, Jamestown, North Dakota," North Dakota State Employment Service, Bismarck, North Dakota, March 1962.

"An Analysis of Hiring Channels of Employers and Workers in the Spokane, Washington Area," State of Washington, Spokane Social Office and Research and Statistics Section, Olympia, Washington, January 1962.

"La Crosse Reemployment Study," the Wisconsin State Employment Service, a division of the Industrial Commission in Cooperation with the Unemployment Compensation Department, September 1960.

"Sources for Employment in Milwaukee County; How 231 Milwaukee Workers Heard About Jobs," by the Wisconsin State Employment Service, August 1961.

William H. Miernyk, Inter-Industry Labor Mobility, Boston: Northeastern University, 1955.

Glen W. Miller, et al., Use of and Attitude Toward the Ohio Bureau of Unemployment Compensation: A Research Report, Project 1472 administered through the Research Foundation of the Ohio State University, 1963.

Minnesota Department of Employment Security, St. Paul Hiring Channels, Prepared by Research and Planning Section, St. Paul, Minnesota, March 1965.

__________, *Job Tenure Study*, July 1966.

Charles A. Myers and W. Rupert Maclaurin, *The Movement of Factory Workers*, The Technology Press of the Massachusetts Institute of Technology and John Wiley and Sons, Inc., New York, 1943.

Robert J. Myers and George P. Schultz, *The Dynamics of a Labor Market*, New York: Prentice Hall, Inc., 1951.

Lloyd G. Reynolds, *The Structure of Labor Markets*, New York: Harper and Brothers, 1951.

Lloyd G. Reynolds and Joseph Shister, *Job Horizons: A Study of Job Satisfaction and Labor Mobility*, New York: Harper and Brothers, 1949.

Harold L. Sheppard and A. Harvey Belitsky, *The Job Hunt*, The W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan. Baltimore, Maryland: The Johns Hopkins Press, 1966.

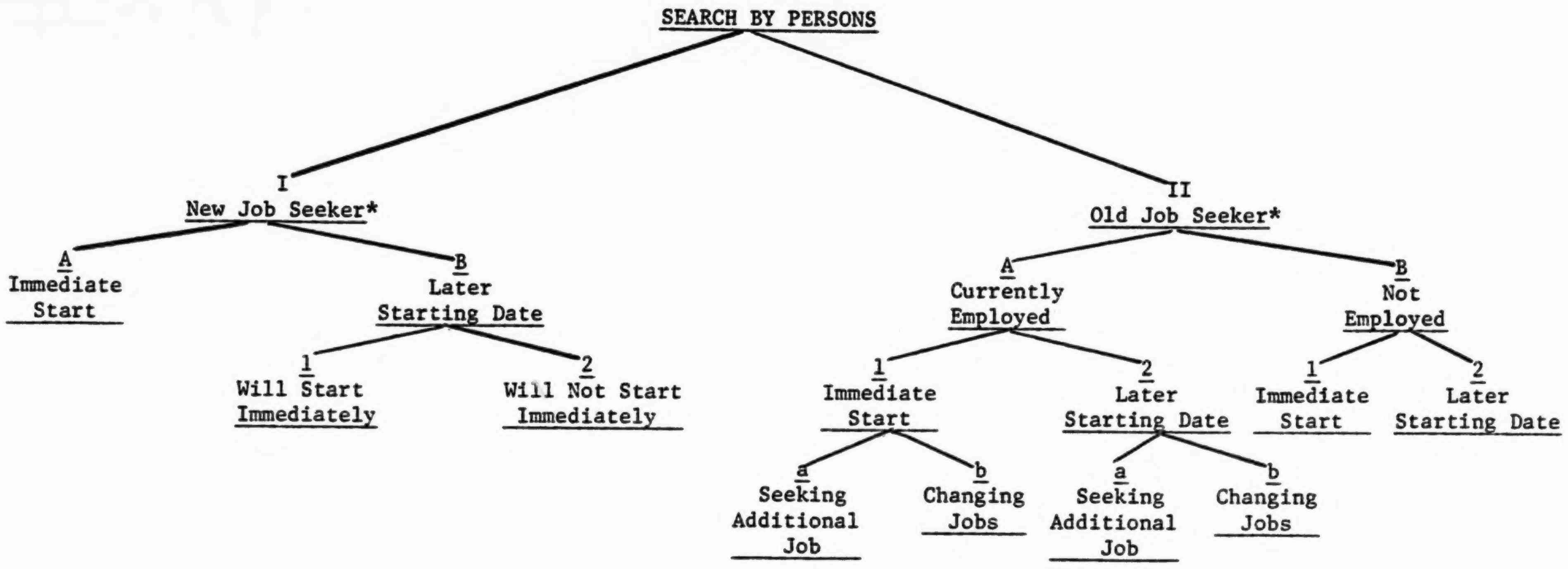
Harold L. Sheppard, Louis A. Ferman, and Seymour Faber, *Too Old to Work - Too Young to Retire: A Case Study of Permanent Plant Shutdown*, Prepared for U.S. Senate Subcommittee on Unemployment Problems, Washington, D.C.: U.S. Government Printing Office, 1960.

Joseph C. Ullman and David P. Taylor, "The Information System in Changing Labor Markets," Industrial Relations Research Association, *Proceedings of the Annual Eighteenth Winter* Meeting, New York, December 28-29, 1965, Madison, Wisconsin, 1966.

Richard C. Wilcock, and Walter H. Franke, *Unwanted Workers*, New York: The Free Press of Glencoe, A Division of the Macmillan Company, 1963.

Richard C. Wilcock, and Irwin Sobel, "Secondary Labor Force Mobility in Four Midwestern Shoe Towns," *Industrial and Labor Relations Review*, Vol.8, No. 4, (July 1955).

TABLE 2: CLASSIFICATION OF LABOR SUPPLY


SEARCH BY PERSONS
I
New Job Seeker*
A
Immediate Start
B
Later Starting Date
1
Will Start Immediately
2
Will Not Start Immediately
II
Old Job Seeker*
A
Currently Employed
1
Immediate Start
a
Seeking Additional Job
b
Changing Jobs
2
Later Starting Date
a
Seeking Additional Job
b
Changing Jobs
B
Not Employed
1
Immediate Start
2
Later Starting Date

*A "new" job seeker was not employed immediately prior to his present search; he (or she) may have been employed at some previous time, of course. An "old" job seeker was employed (and may still be) immediately prior to his present search.

Source: John G. Myers and Daniel Creamer, Measuring Job Vacancies, The National Industrial Conference Board, Studies in Business Economics No. 97, 1967, adapted from Chart 6.1: General Search, p. 119.

In addition to this wide range of possible supply and demand combinations, some studies were explicitly limited to particular subgroups of the working population, such as older workers, women, or Negroes.

The choice of time and place, population selection criteria, types of information collected, and analytical techniques used to evaluate the data all affect the findings and conclusions of a study. Alternative explanations of observed relationships are frequently confronted with little basis for choosing between, or among, the alternatives. Nevertheless, there are instances where one of these explanations is embodied in the written report on a study, while the others are either never mentioned or are dismissed without stating why. This leaves the reader vulnerable to misinterpretation since he is obviously less aware of the nuances of the methodology and data than the author. An attempt is made to avoid this pitfall in the present report.

II

THE EXPERIMENTAL PROGRAM DESIGN

The objectives sought are to discover whether job seekers can be expected to act on the basis of new knowledge about the local labor market, and if they do act, whether their probability of success in finding a job is increased. More specifically, the United States Employment Service (USES) should know whether part of the burden of job-search can be shifted from the local offices of the state affiliates of the USES to the individual job-seeking registrants, thereby reducing public sector spending on this one aspect of service to job seekers, and allowing increased service in other areas with no increase in the overall level of support.

To achieve this objective an experiment was conceived which allowed job seekers to look for jobs under partially controlled conditions. One group of Employment Service registrants would be given the regular service accorded all applicants plus supplemental labor market information (SLMI). Another group of applicants would simultaneously continue to receive the normal services of the office. The members of both groups would be contacted after a time lapse and they would be questioned about their respective job-search activities. The responses obtained and other data collected from Employment Services records would be analyzed to determine whether the experimental group, i.e., those who received the extra information, had behaved differently and if so, what the policy implications of these differences are.

Two basic hypotheses are tested. The first hypothesis is that the transmittal of information about potential job opportunities to experimental group participants will lead them to increase their job-search activity. The second hypothesis is that the experimental group participants will be more successful in finding employment than will the control group job seekers, indicating that their search efforts are more effective than those of the non-recipients of supplemental labor market information. Additional details of the operational program design are deferred until the reader has had the opportunity to place the SLMI experiment in a conceptual context.

III

THE FORMAT OF THE REPORT

The primary purpose of Chapter 1 has been to introduce the uninitiated reader to the literature on the topic of job-search behavior. Also included in this chapter has been a brief introduction to the experimental program which was conceived and designed to test the role of information in the effectiveness of the market mechanism.

Chapter 2 provides a theoretical framework within which labor market behavior can be understood. It is difficult, if not impossible, to evaluate observed behavior unless one has expectations of what will occur and a language which can be used to explain differences between the expected and the observed.[1] However, readers whose only interest is in the design and 'results' of the SLMI experiment can omit this chapter and proceed directly to Chapter 3.

The details of the design, operation, and evaluative technique used in the SLMI experiment are introduced in Chapter 3. It will be difficult to assess the outcome of the experiment unless one knows what went into it.

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[1] An excellent statement of the methodological issue involved here is found in Simon Rottenberg, "On Choice in Labor Markets," _Industrial and Labor Relations Review_, Vol. 9, No. 2 (January 1956), pp. 183-199.

Chapter 4 gives the reader an awareness of the labor market environment in which the job seekers were active. Time-series measures were selected to indicate the activity levels of both the local economy and the Employment Service office in which the experiment was conducted. The description of the industrial structure of the market, and similar details, are minimized. Also included in this chapter is a discussion of the alternative formal channels, or labor market intermediaries, which were available to the participants in the study.

The first comprehensive presentation of the data collected in conjunction with the SLMI experiment is made in Chapter 5, where the characteristics of the participants and the adequacy of the follow-up technique are described.

The SLMI experiment is evaluated in Chapters 6 and 7. Chapter 6 analyzes cross-tabulations of selected variables. This method has limited explanatory power. While the two-way arrays give indications of relationships between, or among, variables, their primary value lies in describing what took place. The relative importance of particular explanatory variables cannot be discovered through this type of analysis. Therefore, the purpose of Chapter 6 is essentially to describe the job-search activity of the participants, and its success.

The structural relationships between individual factors are evaluated in Chapter 7. Using multiple regression techniques the data are analyzed in an attempt to discover the net effect in explaining job-search activity and success of such traditional factors as age, education, color, and marital status, as well as measures of economic pressure, stability of work history, expectation of recall to a former job, and most important of all, supplemental labor market information. This chapter is considered to be the analytical heart of the study.

Chapter 8 restates and interprets the conclusions reached on the basis of the analysis presented in Chapters 6 and 7.

It is incumbent upon the author to conclude with recommendations based on the foregoing experience. This is accomplished in Chapter 9, the final chapter. The recommendations which are made follow directly from the experience gained in conducting and evaluating the SLMI experiment.

CHAPTER 2

THE ECONOMICS OF LABOR MARKET INFORMATION

INTRODUCTION

Information is frequently treated as something which one either has or does not have. For example, Holt and David recently wrote:

> In general, we assume that the [labor market] participants act in line with their own economic interest *within the limits of their knowledge about their economic environment*[1] (emphasis added).

What determines these limits? The acquisition of information is not costless; it will be acquired only up to the point where the expected incremental value to be derived from acquiring another unit is equated to the additional cost incurred by so doing.[2]

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[1] Charles C. Holt and Martin H. David, "The Concept of Job Vacancies in a Dynamic Theory of the Labor Market," in *The Measurement and Interpretation of Job Vacancies*, A Conference Report of the National Bureau of Economic Research, 1966, p. 80.

[2] George J. Stigler, "Information in the Labor Market," *The Journal of Political Economy*, Vol. 70, No. 5, Part 2, Supplement, (October 1962), p. 9.

The purpose of the first section of this chapter is to present six concepts that are relevant to the design of a conceptual framework within which the experimental SLMI program can be evaluated. The second section of the chapter explores the expected behavior of participants in a labor market, using these concepts. The basic questions to be explored in subsequent chapters are set forth in a third section.

I

BASIC CONCEPTS

Information is a Commodity

The introduction of information as a commodity means that it will be demanded and supplied, and therefore a market price can be attached to it.[1] The demand price can be defined as the highest price which will be paid for a given amount of information. But, as Arrow points out,

> ...there is a fundamental paradox in the determination of demand for information; its value for the purchaser is not known until he has the information,...[2]

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[1] Jacob Marschak, "Remarks on the Economics of Information," Western Data Processing Center, UCLA, 1959, p. 80.

[2] Kenneth J. Arrow, "Economic Welfare and the Allocation of Resources for Invention," in The Rate and Direction of Inventive Activity: Economic and Social Factors, A Conference of the Universities-National Bureau Committee for Economic Research, National Bureau of Economic Research, 1962, p. 165.

Unit of Measurement

What is meant by 'amount' of information? In information theory, entropy is used to measure the amount of information contained in a given message. Entropy is a measure of uncertainty, and the relevant problem in information analysis is to specify the degree of uncertainty removed by the specification of a particular message.[1] This measure, however, is independent of the use made of the information.

Value is inherent in use. Therefore, while amount of information is independent of the user, value of information is specific to the individual purchaser.

The Production of Information

Inputs, valued in terms of foregone opportunities, are used to produce an output, information; therefore, it is meaningful to speak of the production of information.[2]

The value of information is both person- and time-specific. A given unit of information can become obsolete.[3]

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[1] Cf. Richard A. Jenner, "An Information Version of Pure Competition," The Economic Journal, Vol. 76, No. 304, December 1966, p. 787.

[2] Fritz Machlup, The Production and Distribution of Knowledge in the United States, Princeton University Press, 1962, p. 36.

[3] George J. Stigler, "The Economics of Information," The Journal of Political Economy, Vol. 69, No. 3 (June 1961), p. 220.

Information As Capital

Because information is produced in the expectation that future productivity will be increased, the productive activity can be considered as an investment. It is important to differentiate between the capital stock of existing information and the flow of investment in new information which continuously transforms the stock.

Quality of Information

Information has a qualitative aspect insofar as it is, or is not, specific.[1] Specificity is dependent upon the use to which the information is put. The uncertainty element in low quality (nonspecific) information must be compensated for by a greater expected return on its purchase at any given price vis-a-vis higher quality information at the same price.

Diffusion of Information

Much of the theoretical work which has dealt with the diffusion of information assumes a population of constant size and composition. If this is not an accurate representation, the expected diffusion pattern and its time profile must be modified accordingly.[2]

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[1] Phillip Nelson, "Migration, Real Income and Information," Journal of Regional Science, Vol. 1, No. 2 (Spring 1959), p. 67.

[2] Cf., S.A. Ozga, "Imperfect Markets Through Lack of Knowledge," The Quarterly Journal of Economics, Vol. 74, (February 1960), pp. 32-34

Summary of Concepts

Section II below, presents an analytical framework in which labor market participants acquire market information at a positive cost.

Since the acquisition of additional information is expected to yield a net return the act of purchase can properly be called investment. The flow of investment in new information alters the form and magnitude of the existing stock of information.

It is necessary to differentiate between private and social investment processes. It is probable that most information acquisition by individuals results only in their own enlightment, not that of society as a whole. The social stock of information may well remain constant while the number and identification of holders of the stock varies.

A distinction should also be drawn between the amount of information and the value of information. Amount in its orthodox sense--the degree of uncertainty removed by specification of a given message (entropy)--is of little value for present purposes. This measure is independent of use. What is required is a measure of the value of information. Value is both person- and time-specific. Value is time specific because information can become obsolete over time. It is person-specific because value is inherent in use, and use is subjective.

The quality dimension of information refers to the specificity of the information obtained, a concept which will be related to labor market information in the following section.

Finally, the target group must be defined in any information dissemination program. The structure and stability of the population in question is of great importance in determining the diffusion pattern of information.

II

A CONCEPTUAL MODEL OF JOB-SEARCH BEHAVIOR

The purpose of this section is to explore the expected behavior of labor market participants in their search activity, using the concepts set forth in Section I, above. What determines the search technique used by a given job seeker?

Investment in Labor Market Information

Investment in labor market information can be looked at from at least three perspectives--that of the worker, the employer, and society.

From the worker's perspective the expected value of additional information is the net additional earnings expected to accrue as a result of incurring the costs to acquire the information.[1]

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[1] Alternative earnings streams have different time profiles. It is therefore necessary to discount these revenue streams to account for time preference, uncertainty, and opportunity costs. See William J. Baumol, Economic Theory and Operations Analysis, 2nd Ed., 1965, pp. 410-413, for a concise treatment of the theoretical rationale for this procedure. If all costs are not incurred in the present time period they must also be discounted. Both costs and revenues are defined here to include non-monetary differences associated with alternative opportunities.

The value of information to an employer is the expected net saving in wage payments to be made for a given factor of constant quality.[1]

Society expects to realize the value of marginal productivity due to a better (more efficient) allocation of resources.

The uncertainty element in the expected stream of income is especially important when an investment in information is being contemplated, because, as was noted earlier, value becomes determinate after acquisition. Therefore, reliance on the price mechanism to allocate informational resources may lead to misallocation.

> ...given incomplete appropriability, the potential buyer will base his decision to purchase information on less than optimal criteria. He may act, for example, on the average value of information in that class as revealed by past experience. If any particular item of information has differing values for different economic agents, this procedure will lead both to a non-optimal purchase of information at any given price and also to a non-optimal allocation of the information purchased.[2]

Both employers with job openings and job-seeking workers must decide whether or not to use a particular source of labor market information on the basis of these non-optimal criteria. Past experience, either their own or that of others who are similarly situated, becomes the primary criterion for decision making.

Actually there is a two-stage investment process involved. An initial investment must be made to gain access to a source of information, e.g. the public Employment Service, but an option subsequently becomes available when information is actually acquired. The participant must make a second decision at this point whether to act on the information received, or not.

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[1] Also properly discounted. See fn. 1, p. 19.

[2] Arrow, op. cit., p. 615.

For example, a job seeker incurs an initial cost (makes an initial investment) when he decides to register for employment assistance with the public employment agency. This decision is based on the net return expected to accrue because of the investment. The option becomes available when (if) the public employment agency refers the registrant to an employer. Depending upon what has transpired since the initial investment, the job seeker can choose any one of the following courses of action:

1) refuse to respond to the referral at all.
2) respond but decline to commit oneself to acceptance of a job offer.
3) respond and accept a job offer.

Each of these options will have a different expected payoff, which in turn will determine the one to be selected. (A fourth possibility is that a job offer would not be made. This contingency is not controlled by the job seeker however.) The role of these alternatives in the analytical framework will be developed in greater detail below.

A common reaction to this abstraction from reality is that it ignores, or at least does not make explicit, institutional considerations such as the inability of employers to discriminate on the basis of color, age, or religion when they use the services of a public agency, or union-management arrangements which effectively preclude participation by an outside agency. This is not a valid criticism because each of these institutional impediments to a smoothly functioning market mechanism can itself be explained in terms of costs and expected payoffs.[1]

The following simplifying assumptions are made: workers are unemployed but are seeking work, and employers have a job vacancy which they want to fill.[2]

The Unemployed Worker's Decision

An unemployed worker will expect to receive a return from searching because the investment is expected to alter his awareness of the demand for his services. This increased awareness can be in the form of additional knowledge about one or more opportunities already known (search at the intensive margin), or new knowledge of one or more opportunities not previously known (search at the extensive margin). The return to intensive search is dependent upon the degree of nonhomogeneity of opportunities. The less alike alternatives are, the greater the expected return from investment in intensive information acquisition.[3]

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[1] Cf. Gary S. Becker, The Economics of Discrimination, The University of Chicago Press, 1957, and George B. Baldwin, "Tulamusa: A Study of the Place of the Public Employment Service," Industrial and Labor Relations Review, Vol. 4, (July 1951), pp. 509-526.

[2] It is assumed that the worker's decision to work and the employer's decision to fill a job opening have already been made. In other words, each participant is assumed to engage in active search over some time period. It is entirely possible that at the end of a certain period of time the participant will reassess the opportunity costs involved in searching and alter his behavior pattern.

[3] Albert Rees "Information Networks in Labor Markets," The American Economic Review, Vol. 56, No. 2 (May 1966), p. 500.

At the same time that an individual decides whether or not to invest in additional search he must decide through what intermediary(ies) this investment will be made. There are alternative sources of information about labor market conditions, each of which can be expected to have a different payoff. The Employment Service is a relevant source of information to a member of the labor force only if he expects it to alter his awareness of the demand for his services.[1] Furthermore, a registrant at an Employment Service office must expect to receive

1) a single job offer,
2) a greater number of job offers,
3) qualitatively superior job offers, or,
4) any one of these sooner,

at less cost than would otherwise have been the case; that is, had he relied exclusively on other sources of labor market information.

A cost is incurred to register with the Employment Service office. This cost will be borne only if the registrant expects to receive a positive return. A return on the expenditure is possible only if labor market information is received.[1] Some applicants to Employment Service offices, however, either receive no information or receive information which has a negative expected value. A negative net payoff is expected if the recipient of the information is sufficiently pessimistic about his chances of successfully acting on the information. Success here means finding an acceptable job. In this case the expected additional cost of searching exceeds the expected return to so doing.

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[1] Recipients of unemployment compensation must register with the Employment Service, as must employable welfare recipients, with the determination of employability being made by welfare agency personnel. The theoretical discussion here does not consider these individuals since their behavior is not necessarily based on an objective of securing labor market information.

In either case, whether information is received, and if so, whether the net value of the information is positive or not, influences the decision to make a similar investment in the future. As was stated above, the decision to invest in information is based on non-optimal criteria, and foremost among these criteria is past experience in having made similar investments.

The probability that a given applicant will receive information through a given intermediary depends upon many factors, including the stock of knowledge which the individual already possesses, and the demand for and supply of workers with the applicant's qualifications. It may appear that only supply and demand expressed through the particular intermediary is relevant in determining the probability that a given applicant will receive information. However, these partial market concepts are not determined in isolation from the market-wide measures. For example, employers are often said to rely on the Employment Service only as a last resort, implying an interaction between demand expressed through the Employment Service and the more comprehensive market measures of supply of and demand for the labor skill in question.

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[1] There is one exception: An individual may be told that there are no jobs available of the type he is looking for. This can be considered to be information because it does alter his awareness of the demand for his skill, even though it may only be a reinforcement of his previous perception of the market.

The Cost of Information Production

The concept of least-cost production of information has been introduced to compare participant use of the public employment agencies with the use made of other sources of labor market information. These other sources include friends and relatives, private employment agencies, unions, newspaper advertisements, and gate application with no prior knowledge of openings. Use of these sources is, of course, not mutually exclusive, and simultaneous or sequential use of more than one is common practice.

The decision which each participant in the market must make is which of these sources to use and in what proportions. The answer, given the previously stated assumptions about participant behavior, is that an individual will invest each dollar in the combination of information sources which is expected to pay the highest private return; that is, the highest return accruing to the investor himself. The observed behavior pattern of labor market participants is one of infrequent use of the Employment Service. One inference that can be drawn is that the expected payoff to investment in labor market information provided by the Employment Service must be low relative to that expected from other sources. If the Employment Service is to become a more effective information dispensing intermediary in the labor market it will apparently have to either reduce the private cost of acquiring labor market information, or increase the expected payoff on a given investment. The latter choice seems to offer the most realistic hope, since costs associated with Employment Service initiated search are already largely borne by society in general, and therefore only indirectly, if at all, by any given market participant.[1] The incidence of search costs is introduced below in connection with society's interest in labor market efficiency.

The crucial question remains unanswered: What role should the Employment Service serve among the variety of labor market intermediaries?

Society's Interest in Labor Market Efficiency

So far, the expected behavior of unemployed workers has been presented. What can be said about society's interest in Employment Service operations? It has been shown that the participants in the market only consider their private costs and expected returns in deciding whether to invest in the Employment Service as a source of information. It is apparent, however, that the general population subsidizes the users of the Employment Service in the same way that most other government services are offered. If the users of a resource do not consider all costs, a reallocation will usually increase the efficiency of resource use.[1] Taxpayers support the operation of an institutional labor exchange which holds itself open to serve anyone who requests service. It is conceivable that a system of user charges on the participants in the market would result in a more desirable allocation of public sector resources. This is, of course, a highly idealized objective. Virtually every public sector use of resources can be subjected to the same critical analysis.

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[1] A proposal to reduce the private costs of search even further was included in the proposed Employment Service Act of 1967, which reads in part as follows: "Pay, or otherwise provide under such regulations as are prescribed by the Secretary for any portion of the local transportation of a person described in subsection (e) of this section between a public Employment Service office or his place of residence and his place of work or interview: Provided, that payment to any individual shall be made only for such period of time as the Secretary finds necessary to foster his employment," A Bill, 90th Congress, 1st Session, H.R. 11280, p. 7.

How is the labor market mechanism affected by the presence of the Employment Service? In general, the potential returns to society from Employment Service operations can be categorized in the following way:

1) shorter duration of unemployment and of job vacancies
2) a better allocation of human resources; that is increased marginal productivity
3) reduced transfer payments, e.g., unemployment compensation and public assistance.

Each of these benefits should be considered in net terms. For instance, the value of a shorter duration of unemployment is considered relative to what the duration would have been in the absence of the Employment Service. Assume that an Employment Service registrant's duration of unemployment is reduced because he fills a job vacancy which some other (identical) unemployed worker would have otherwise filled; society can only benefit if the increased duration of unemployment of the still unemployed individual does not exceed the reduced duration of the former's unemployment. To take an extreme example, it is conceivable that a negative social return (a net social cost) will be incurred if the same people are placed in the same jobs after the same duration of unemployment as would have been the case in the absence of the Employment Service. This could occur if the cost of search is greater through the Employment Service than it would have been through an alternative channel.[1]

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[1] See Lowell E. Gallaway, "Labor Mobility, Resource Allocation, and Structural Unemployment," The American Economic Review, Vol. 53, No. 4, September 1963, pp. 694-716, for a discussion of labor market efficiency. A more formal model is developed in Gallaway's recent monograph, Inter-industry Labor Mobility in the United States 1957 to 1960, Office of Research and Statistics, Social Security Administration, Research Report No. 18, 1967, p. 330.

The opportunity costs of the alternative means of using public sector resources should be compared, and that combination of intermediaries should be identified which would minimize the value of foregone opportunities.

It is possible to test the implications of the conceptual model set forth here. In fact, such tests must be made, because we do not presently know much about the relative efficiencies of the alternative sources of labor market information. What do the respective information production functions look like? Are there economies or diseconomies of scale in any or all of them? What degrees of specialization might be desirable in Employment Service operations? These questions have not been answered.

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[1] The SLMI experiment is designed to investigate this point. Can the burden of job-search be transferred from a formal labor market intermediary whose use of resources incurs a high opportunity cost, to the job seeker himself whose alternative activities may be of lesser social value?

III

This section briefly outlines the types of questions which are amenable to empirical testing using data collected in conjunction with the experimental SLMI program described in Chapter 3.

The basic question to be answered is this: Can labor market efficiency be improved by providing unemployed workers with non-specific information about employer demand for their skills? That is, can it be assumed that the present market mechanism is so imperfect that information whose value includes a large uncertainty element will lead to greater private investments in job-search, and that the payoff to this incremental search will be an improved allocation of resources such that a positive social return is realized?

Actually, two tests must be independently carried out. One test is of the following hypothesis: The expected return to private investment in job-search activity is positive the greater the amount of information a person has about the labor market, at least up to some level of information, and therefore an individual will invest more in looking for a job. The second hypothesis to be tested can be stated as follows: The realized return to additional private investment in search will be positive over some range, suggesting the feasibility of additional private and/or public sector investment in labor market information production.

The difference between the two is this--the use of the information produced (hypothesis one) depends only on the applicant's expected value, whereas the realized value (hypothesis two) depends upon the informational content itself.

Are unemployment compensation recipients less enthusiastic searchers for work?

Do Negroes search in different ways than whites do?

What characteristics are related to job-search success?

What search techniques are most efficient, in the sense that use implies a high probability of success?

To what extent is expectation of recall related to job-search behavior?

These are indicative of the types of questions which are explored in the following chapters. In addition to seeking information about simple two-way relationships between individual variables and search behavior in Chapter 6, the use of multivariate analysis in Chapter 7 allows exploration of the net relationships between variables.

CHAPTER 3

THE SUPPLEMENTAL LABOR MARKET INFORMATION EXPERIMENTAL PROGRAM DESIGN

INTRODUCTION

The design of the operational supplemental labor market information (SLMI) program involved substantial adaptation from the desired to the achievable. There were many times when a choice among alternative procedures was necessary.

Section I of this chapter deals with the basic conceptual framework, including the selection of labor market area and occupational representation. Section II outlines the specific features of the SLMI experimental program. Section III discusses the technique and research instruments which were developed to secure the data needed for an evaluation of the SLMI program. The final section includes some observations on the comprehensive design of the project.

I

THE BASIC RESEARCH DESIGN

Labor market analysts have speculated for decades about the role of information in labor market efficiency. Is a large part of total unemployment frictional, in the sense that people are only between jobs, suggesting that an increase in information about potential employment opportunities could be expected to make substantial inroads on the total number unemployed at any given point in time?

One or Two Labor Markets?

Initially, it was thought that a comparative study would be of greatest value. Supplemental information would be provided to job seekers in both an active labor market and in a weak market to see what differences would appear in unemployed workers' search behavior. The logistics of operating two independent experimental programs, however, appeared to be insuperable. One difficulty was posed, for instance, in finding two comparable local Pennsylvania State Employment Service (PSES) offices servicing such labor markets which would have intake flows conforming to other design constraints, such as time and occupational homogeneity.

Occupational Representation

The initial decision to be made was concerned with the identification of occupational parameters. It was thought that if the entire spectrum of occupations was represented, the occupationally related differences in job-search behavior would obscure the effect of SLMI on search activity.

In large metropolitan labor markets, where the scale of operation allows for specialization, public Employment Service operations are frequently grouped into four occupational classifications as follows:[1]

1) Professional, technical, and managerial
   Clerical and sales

2) Service

3) Farming, fishery, forestry, and related

4) Processing
   Machines trades
   Benchwork
   Structural work
   Miscellaneous.

The wide-ranging approach to search is most feasible for the fourth group. These occupations are designated trade and industrial. Therefore, the first decision reached was to limit occupational representation to the processing, machines trades, benchwork, structural work, and miscellaneous[2] classifications.

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[1] Each line incorporates the first digit of the six-digit occupational designation shown in the Dictionary of Occupational Titles, 1965, Volume II, Occupational Classification and Industry Index, Third Edition, p. 1.

[2] There are eight two-digit categories included under the miscellaneous heading; they are:

Motor freight occupations
Transportation occupations, n.e.c.
Packaging and materials handling occupations
Occupations in extraction of minerals

It was hoped that this restriction on occupational diversity would increase the sensitivity of the methodology to SLMI induced differences in search behavior. It is not clear a priori what factors influence job-search patterns. Do job seekers with machines trades skills look for work in more similar ways than do, say, all Negro job seekers regardless of skill area?

Location

Having selected the occupational representation desired, a labor market area had to be chosen. Pittsburgh and Philadelphia presented the two meaningful alternatives. All other urban centers in the state of Pennsylvania were too small to attain the desired flow of qualified job seekers through an Employment Service office in the short period of time alloted for the operational phase of the project. The Pittsburgh labor market was selected as the site of the SLMI experimental program because it represents a more isolated 'closed' labor market, where potential employment opportunities are less spatially dispersed than is true of the Philadelphia SMSA which included three New Jersey counties.

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[2] Occupations in logging
Occupations in production and distribution of utilities
Amusement, recreation, and motion picture occupations, n.e.c.
Occupations in graphic art work.

II

OPERATIONAL DETAILS

Overview

The following experimental program was conceived: supplemental labor market information would be given to selected Employment Service registrants. A control group of applicants would be identified who would receive the normal services provided to those for whom no specific job referrals are available. Both the experimental and control group applicants would be contacted after a specific period of time to record detailed information about their job-search activity during the intervening period.

Selection of Sample

The intake flow in the chosen Employment Service office is highly heterogeneous. Continuums of age, education, and skill are found among applicants. The job seekers are male and female, Negro and white, employed and unemployed, union members or not, transfer payment recipients or not, etc.

The question to be faced, given this diversity, was: How much homogeneity to impose upon the study population? The following criteria for applicant participation were established for the reasons indicated:

> Male - The population was limited to males because the flow of females through the particular Employment Service office selected was too small to secure an adequate number for subsequent analysis.

Seeking Full-Time Year-Round Work - The nature of the SLMI itself necessitated limiting participation to those who said they were interested in full-time year-round employment. The development of information about part-time opportunities was thought to be too difficult to warrant its inclusion. Seasonal employment opportunities would be easier to identify than part-time, but the qualitative difference between annual and seasonal employment was held to be of sufficient importance that only the former should be included.

Two Years Work Experience (not counting military service) - This is the most difficult criterion to defend precisely. Why not six months, or four years work experience? Why have any such criterion at all? The purpose in having this criterion was to increase the probability that applicants would have some familiarity with labor market mechanisms; that is, that applicants could be expected to know something about alternative ways of looking for work in their skill area. A problem arises in the use of work experience as a proxy for a level of labor market knowledge. The work experience may have been continuous and in a location other than Pittsburgh, so that the individual would have little or no knowledge of the Pittsburgh labor market. On the other hand, as one matures in his skill area, he becomes increasingly aware of the way(s) in which such jobs are secured. Military experience was ruled out as being of virtually no value in understanding the operation of an urban labor market. The two-year time period was chosen to allow the collection of data on recent labor participation as one explanatory factor in search behavior.

Skill and Interest Not Limited to Construction - There was apprehension that the study population would include a large number of construction workers who would not consider alternative employment opportunities, and who would rely heavily on union and contractor initiated information. This was not considered desirable in light of the objective of testing the use of Employment Service supplied information, plus the difficulty of developing meaningful general information about construction employment opportunities. Therefore, if an applicant expressed interest only in construction work, he was not accepted into the study population.

Other criteria were considered but not adopted. Among the criteria which were not used was the applicant's expectation of recall to a previous job. Since many applicants to Employment Service offices have some expectation of recall, it was decided to retain this as an explanatory variable when seeking determinants of differences in job-search behavior.

Also considered was a requirement that an applicant be free to look for work for a given number of days each week. However, it was thought that an applicant would respond affirmatively to this question, no matter what his actual situation was. This concern was especially directed toward the expected behavior of unemployment insurance claimants who are affected by the eligibility requirements of the state unemployment insurance law, which holds that a claimant must be registered at a public employment office and that:

> ...the agency may require that the claimant, in addition to registering for work, make other efforts to obtain suitable work and give evidence of such efforts[1] (emphasis added).

With these considerations resolved, attention was turned to the actual operational aspects of the experimental program. How would the appropriate applicants be identified and channeled in the correct direction to receive the appropriate service?

Participant Identification

A decision was made to accept only the current inflow of applicants to the Employment Service office; that is, it was decided not to go into the active file of previous applicants to secure participants for the SLMI experiment.

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[1] See, Comparison of State Unemployment Insurance Laws, BES No. U-141, U.S. Department of Labor, 1965 (Rev. 1967), pp. E-5ff.

There are four basic sources of applicant intake: unemployment insurance (UI) claimants, welfare (DPA) recipients, referrals from the Human Resource Development Center (HRDC) of the PSES, and walk-ins who apply on their own volition.

> UI Claimants - Every person who files a claim for UI benefits must also register with the Employment Service. Since UI and Employment Service operations are functionally and spatially separated, each registrant fills out a Form ES-511 Application Card at the UI office, which is then mailed to the proper Employment Service office. As these cards are received in the Employment Service office, the registrants are scheduled for a personal interview and a call-in card is sent informing the person when to appear.
>
> DPA Recipients - Employable welfare recipients are sent to the Human Resource Development Center of the Employment Service to receive whatever employability services are appropriate. If no services are required, the welfare recipient is immediately referred to the proper Employment Service placement services office. Otherwise, the appropriate services are rendered within the HRDC and then the applicant is referred to a placement office. The SLMI project participants who are designated DPA recipients, may have come from either, or both, of these groups.
>
> (Non-DPA) HRDC Registrants - The Human Resource Development Center concept is an outgrowth of the experimental Youth Opportunity Center programs conducted several years ago by the Bureau of Employment Security. Its purpose is to centralize the non-placement activities of the Employment Service in one location. Applicants to other Employment Service offices who are not considered to be job-ready are referred to this office. After the necessary counseling or training need has been fulfilled, the applicant is referred back to the appropriate placement office. This source of intake was not individually identified for analytical purposes for two reasons. First, the HRDC program was initiated after the research instruments had been developed. More importantly, the number of such applicants is extremely small, and an insufficient number would have participated to have made meaningful comparison possible.
>
> Walk-Ins - Each of the above three groups are referred to the Employment Service office by another public agency. In addition to these groups there are applicants who seek work through Employment Service auspices on their own. It is probable that some of these people who are identified for

analytical purposes as having registered on their own volition were, in fact, referred to the Employment Service by private individuals or agencies, or read about opportunities in newspaper advertisements placed by the Employment Service. Also, former UI claimants who have exhausted their benefits but who remain unemployed are classified as walk-ins, if they return to the Employment Service office and ask to have their application reactivated.

The intake flow at the Employment Service office is comprised of these four groups. After careful consideration, it was decided that the HRDC classification should be omitted for project purposes, and to include registrants from each of the other three sources in the study population. This facilitated the identification of qualified applicants. It now became possible to have the intake unit receptionist in the Employment Service office act as the sole identification contact. Since each applicant is required to appear in person, regardless of the initial reason for registration, this receptionist is the one person who confronts every individual coming into the Employment Service office.

The three applicant criteria[1] were printed on slips of paper. A slip was completed by each male applicant appearing for his initial interview. If he were looking for full-time year-round work, including in his range of consideration non-construction opportunities, and if he had at least two years of civilian employment experience, he was identified as a subject for the SLMI project.

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[1] Maleness being visually identified.

Experimental and Control Group Participation

The purpose in identifying a control group was to provide a baseline against which the experimental group could be compared. It was desirable for the control group to be similar to the experimental group in all characteristics which were expected to influence job-search behavior. If it happened that all such factors were identical, a strong case could be made that any differences in search activity would be due to the supplemental information; or, if no differences in search behavior were evidenced, that the supplemental information in the form administered was of no value. To the extent that the *ceteris paribus* condition did not hold, any conclusion about the effect of SLMI on job-search behavior would be cast in doubt. The crucial problem, of course, was how to determine *a priori* which factors influence search behavior to such a degree that they should be controlled. Two possible solutions to this problem were considered.

One possibility was to establish quotas for certain characteristics in group, e.g., forty applicants over 50 years of age, one hundred with high school diplomas, etc. In other words, a careful matching system could be conceived to assure similar and large enough numbers in particular categories for analysis. This procedure was dismissed as too cumbersome and unnecessary to achieve the desired objective.

The second procedure, and the one that was chosen, was simply to assume that with approximately 400 subjects in each group a random distribution process would result in an acceptable degree of intergroup homogeneity. (The resulting distributions are described in Chapter 5.) This procedure also facilitated the operational implementation of the program. Since every registrant had a social security number, the last digit was requested on the criteria slip which was given to each male applicant by the receptionist. When the desired criteria were met, the receptionist placed the applicant in the control group if the last digit of his social security number was odd (1,3,5,7,9), or in the experimental group if this digit was even (0,2,4,6,8).

The Control Group and Non-Project Participants

The intake unit receptionist was instructed to direct all female applicants, male applicants who did not meet the SLMI project criteria, and control group subjects to the regular Employment Service intake interviewers. These applicants received the normal services of the Employment Service office. This service is essentially one of verifying the accuracy and completeness of the applicant's ES-511 Application Card, checking current employer orders on file to see if a specific referral can be made, and if not, providing general job-search advice to the applicant. If an appropriate job order is on hand, the applicant is directed to a referral interviewer, who maintains liaison with the employer in question and who will make the actual referral.

The only difference in treatment between the control group subjects and non-SLMI project participants was that portions of two project data forms[1] were to be completed during the interview of the former group. This procedure took approximately 10 minutes more than the average interviewing time of from 15 to 20 minutes. These project forms were designed in a 5" x 8" format, which is the same size as the ES-511 Application Card, to increase the probability that the applicant would regard them as regular Employment Service forms. The control group applicants were not told the purpose for seeking this additional information, and no applicant questioned the procedure. This was the only purposeful difference in service accorded the control group subjects in comparison with non-project applicants.

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[1] Copies of these instruments are included in Appendix C.

It is important to recognize that the regular service received by Employment Service registrants is an individualized service. No attempt was made to control this procedure. However, particular services were recorded on the applicant's record, so that such activities as referral to an employer could be taken into account in subsequent analysis of job-search behavior.

The Experimental Group

The applicants who were accepted as experimental subjects were directed by the intake unit receptionist to one of three intake interviewers, each of whom had received specific training in the use of the SLMI materials, and whose primary responsibility was to interview experimental group subjects. When there were no such applicants waiting, these interviewers dealt with non-project applicants. This helped these interviewers maintain a sense of balance and perspective with regard to the services accorded Employment Service registrants who were not participating in the SLMI project.

What were these experimental group subjects to receive? What did the supplemental labor market information actually consist of?

The Supplemental Labor Market Information

The following steps were taken to develop the supplemental labor market information:

1. The closed employer order file in the Pittsburgh trades and industrial occupations office was used as the core of the information package. This file contains a form for every order placed with the office, regardless of whether a referral was made or a placement was achieved. The following steps were undertaken--

   a. All orders placed before January 1, 1964 were purged from the file.

   b. The occupational titles on all orders placed between January 1, 1964 and June 30, 1966 were recoded. The Pittsburgh District of the PSES participated during this period in the experimental use of the Functional Occupational Classification (F.O.C.) which was the forerunner of the new 3rd edition of the Dictionary of Occupational Titles (D.O.T.). It was necessary, therefore, to convert the F.O.C. codes to D.O.T. codes. This was facilitated by the exclusion of repeat orders for a given occupation by a particular firm. For any specific occupational title, the conversion was only necessary once, and thereafter, a mere transcription of numbers was made.

   c. Once the recoding was completed and repeat orders were pulled from the file, a reordering was carried out which grouped occupational titles by the most refined D.O.T. code (six digits).

   d. Having eliminated duplication, having established a consistent coding system, and having reordered the file by occupations and job clusters, the stage was set to transcribe selected information from the order forms into work sheets to be used by the interviewers in communicating labor market information to the applicants.

   e. The information which was transferred from each order form to work sheets consisted of:

1. occupational title
2. six-digit D.O.T. code
3. sex desired for job (if specified)
4. physical demands of job (coded, if specified)
5. work experience necessary (or desired)
    a. in the D.O.T. specified (coded)
    b. other (coded)
6. educational attainment necessary (or desired)
7. wage (specific or range)
8. car necessary?
9. location of employment (coded by three-digit ZIP code)
10. name of firm
11. address of firm
12. special requirements

f. The completed work sheets provided a profile of occupational openings submitted to the Employment Service office over the three-year period January 1964-December 1966.

2. The D.O.T. titles included the first digits 5-9, i.e., processing, machines trades, benchwork, structural work, and miscellaneous. These are the occupations handled by the trades and industrial occupations office.

3. This core of occupational information was supplemented by abstracting selected information from ES-551 (minor market employer record card) and ES-703 (major market employer record folder) forms. The latter group includes all employers of 50 or more employees, and the minor market group includes all others. There were 258 major market employers who fell within the purview of the Employment Service office. All of these firms were represented in the SLMI listing of firms to be used. There are approximately 1400 minor market employers represented in the Employment Service office files. Every fifth card was selected from this file, giving a total of 280 minor market employers. (Duplicates of those firms and occupations already listed from the employer order forms were replaced by a second selection of cards from the files.)

4. This procedure provided approximately 250 major market firms (some of whom had used this Employment Service office since 1963, and some who had not), a much larger number of minor market employers who had used the Employment Service office since 1963, and approximately 280 minor market employers who had not used the services of the office since 1963. The significance of prior use of Employment Service office services is explored in Section IV of this chapter.

5. The ultimate product which was to be used in the interviewing of the experimental group, was a list of occupational titles with pertinent information on qualifications required by each firm.

There are several specific limitations in the above procedure. First, there are two branches of the trades and industrial occupations Employment Service office which serve concentrated employment areas within Allegheny County. These offices are located in Ambridge and McKeesport. Job orders placed through these offices would not have been in the central city office files, and would not have been included on the SLMI work sheets. Secondly, the list was heavily weighted with firms that had made previous use of Employment Service services. The significance of this is discussed in Section IV of this chapter. Finally, the use of closed employer orders was limited to those filed between January 1964 and December 1966. On the one hand, it was thought that the use of pre-1964 orders would run too great a risk of obsolescence with little to be gained since it is known that repeat orders are common. It is therefore probable that many earlier orders were duplicated by those filed during the inclusive three-year period. On the other hand, the use of post-1966 orders would have jeopardized the separation of supplemental information from the ongoing operations of the Employment Service office.

It should be stressed that the SLMI program was to be administered as a supplement to the regular operative procedures of the Employment Service office. Great care was taken not to restrict the office personnel from making normal use of their knowledge of the labor market. That is to say, labor market information can be arrayed along a continuum, making it difficult to determine how much information is transmitted during a regular interview, and how much additional information was given during an interview with an experimental group subject.

The Experimental Interview and SLMI

The experimental subject was to receive all services he would have received had he not been selected for participation in the SLMI project, plus the supplemental information. During the interview the following information was recorded: primary occupational code, physical capacity (lifting ability), labor force experience, education, desired wage rate, access to a car, ZIP code, and skill training completed. This information was entered across the top of the card allowing the interviewer to use it to scan the SLMI work sheets, which had been designed with identical spacing characteristics. In this way, a matching procedure was established in which supply and demand characteristics were to be assessed by the interviewer in terms of mutual appropriateness. Since a specific Employment Service referral was not involved, the interviewer was not bound by the previously established employer criteria. However, it was recognized that the fulfillment of these criteria would probably increase the applicant's chances of securing employment. As has always been the case, therefore, the interviewer made a subjective determination of qualification.

Using these supply and demand criteria, the Employment Service interviewer identified eight firms that were known to have employed workers with the applicant's skills, interests, or personal attributes during the past four years.

Why eight firms? The objective was to provide the experimental group applicants with sufficient potential opportunities to enable subsequent differentiation between those who did, and those who did not, act on the basis of additional information. At the same time, allowance had to be made for the probability that as the number of firm names given increased, the subject's confidence that these were in fact probable opportunities and not a telephone directory listing of Pittsburgh employers would decrease. Also, specific recall was desired of action taken with regard to each firm name given, so that the evaluation of the SLMI experiment would be facilitated. The number eight, then, is not completely arbitrary. It could have been seven or nine, but the general range fulfills the criteria established.

Each applicant was asked if he had already applied at any of the eight firms, or if he knew whether or not they were hiring. If the subject had applied or had knowledge of openings, the particular firm in question was replaced. This enhanced the truly supplemental nature of the information in question. Obviously there was not an equal probability that applicants with different skills, work histories, and personal attributes could receive eight potential opportunities of equal 'value'. In fact, initially the intent was to distribute the eight firms between the subject's primary and secondary occupational codes. This procedure did not prove to be operationally feasible because many applicants do not have experience or training in more than one occupational area. In addition, many applicants express disinterest in opportunities outside a narrow range of occupations. There was some discussion

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when this aspect of the methodology was being considered concerning whether the applicant's perspective might be broadened by giving him information about potential opportunities in more than one occupational area. The decision against this was based on a concern that the SLMI experiment would become too complex, and that in an attempt to answer a large number of interesting questions, confidence in the answer to the fundamental research question would be diminished.

The Employment Service interviewers were instructed to introduce the SLMI list by telling the subject that, while the Employment Service was unable to give him a specific referral to a job opening filed by an employer, information was available about firms which had in the recent past employed workers with the applicant's interests and abilities.

If the applicant inquired whether the firms were actually hiring, the interviewer was instructed to reply: "I don't know whether there are openings at these firms, but I do know that they have recently hired people like you and they have job classifications for which you are qualified."

If the applicant asked if he had to go to these firms, he was told: "these are not job referrals, they are firms which we know hire people with your interests and skills, and which we, therefore, think will help you find a job."

In other words, experimental group subjects were given the list of eight firms with what might be called a 'positive-neutral' introduction. Mild encouragement was given to apply at these firms, but no deception was practiced. A registrant was never told that there were job openings at the firms listed, but neither was he told that there were not openings.[1] A few subjects wanted the Employment Service interviewer to telephone the employers to see if there were openings. This was not done. A larger number expressed an intention to call the firms themselves, rather than personally visiting each one. This practice was discouraged by the interviewer as being offensive to employers and likely to lead to a rebuff even if an opening was in fact available. This, then, is what the SLMI experiment was all about.

Does increased knowledge of market conditions assure a better allocation mechanism?[2] The purpose in identifying a control group was to establish a baseline measure of job-search activity against which the behavior of the experimental group could be compared. This is the only way an effective test could be conducted of the hypothesis that additional information leads to additional search activity, which in turn leads to a better allocation of resources. Having designed an operational experimental SLMI program, how was the experiment to be evaluated?

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[1] There were breakdowns in communication, however, and some of the applicants who received an SLMI list understood that there were not openings, or that the firms would initiate contact if openings were available.

[2] The issue of whether or not giving eight firm names and addresses to a job seeker necessarily constitutes increased knowledge of market conditions is explored in Section IV of this chapter.

III

A TECHNIQUE TO COLLECT DATA

When the participants in the SLMI program, both experimental and control group registrants, walked out the door of the Employment Service office, they were assumed to be oblivious to the fact that they were included in a research project. At no time in the interview was an applicant told that he would be contacted subsequent to his departure from the Employment Service office. Differences in internal office procedures and services were considered to be common, so that project imposed differences were not extraordinary. Even if two applicants entered the office together, and one was given a list of eight firm names and addresses while the other received nothing, it was thought that a comparison of treatments would merely result in their assessment of one Employment Service interviewer as having greater interest in helping job seekers. There was no way to totally eliminate the possibility that this comparative action would affect the behavior of the subjects. However, it is thought that the "Hawthorne" effect would not be significant, at least during the first two weeks of search after registering with the Employment Service. It is possible that search behavior would be influenced after the first follow-up interview, although no measure of this effect is available.

Nine days after his initial Employment Service interview, a letter was mailed to each applicant who had been included in the SLMI project population. This was a personally addressed photo-offset reproduction of a typewritten statement indicating that:

> ...The Pittsburgh District of the Pennsylvania State Employment Service is cooperating with the Institute for Research on Human Resources at The Pennsylvania State University to carry out a research project whose purpose is to increase the effectiveness of the state's service to unemployed workers.
>
> In connection with this cooperative effort your name has been selected from the files of the Employment Service to be included in this research project. Approximately 800 others are being contacted over a two-month period.
>
> A representative of The Pennsylvania State University will call at your home....

The letter was printed on The Pennsylvania State University letterhead and was signed by Jacob J. Kaufman, Director, Institute for Research on Human Resources, The Pennsylvania State University. Each envelope was individually stamped to avoid the use of the Employment Service mailing permit symbol. These steps were taken to divest the follow-up procedure of any identification with the Employment Service.

This desire to avoid identification with the Employment Service for follow-up purposes was highly controversial at the time the decision was made. The rationale for doing so was to avoid raising any question as to the veracity and objectivity of the registrants' responses about job-search activity because the questions were being asked by someone who has the potential to disqualify them from eligibility for unemployment insurance payments or welfare benefits. Since the evaluation of the SLMI experiment relies heavily on this measure of job-search activity, no unnecessary chances were taken to expose the methodology to false response bias.

The argument against severing Employment Service associations for this purpose was based on the belief that a certain degree of rapport exists between the Employment Service registrant and his interviewer, and that greater confidence would be warranted if the follow-up interviews were conducted by Employment Service personnel.

The final decision to sever ties with the Employment Service for this phase of the project was based on two factors. First, the indicated concern with the perspective of transfer payment recipients dominated the discussions. In addition, however, there was concern that since the Employment Service people would only be able to conduct these follow-up interviews on an after-hours extra compensation basis, a lesser probability would exist that the two-week time interval between initial Employment Service interview and follow-up contact could be maintained. Adherence to this 14-day period was held to be an integral part of the controlled experimental nature of the project, and therefore flexibility in the follow-up capability was thought to be necessary. For these two reasons the decision was made to conduct the follow-up interviews in complete independence from the Employment Service.

The letter announcing that the registrant would be contacted arrived on the tenth or eleventh day after his initial Employment Service interview. Up to this time it can safely be assumed that the subject's activity was unaffected by an awareness that he would be asked what he had done to find a job. In the letter, however, the subject was told:

> ...The purpose of the visit will be to ask you a few questions about your experiences in looking for work. The interview will take from 10-15 minutes of your

> time. The answers you give will be solely for the use of the research group at The Pennsylvania State University. In fact, your name will not appear on the questionnaire, so that even they will not be able to identify you personally. Your experiences will be grouped with those of the other 800 participants in the study for statistical analysis. Again, no one other than The Pennsylvania State University research team will know what you say.

Two types of potential bias were introduced at this point. First, the subjects may have actually changed their behavior patterns, i.e., they may have more actively sought work (the "Hawthorne" effect). Second, the subjects had time to think about the upcoming follow-up interview, and may have fabricated job-search activity patterns. The intention in pointing out these possible biases is not to create undeserved suspicion about the honesty of job seekers who are also transfer payment recipients, but rather to assure the reader's full awareness of possible limitations in the evaluation of the SLMI program.

An attempt was made to contact each applicant by telephone prior to calling in person to arrange a convenient time for the interview to be conducted at the registrant's home. If telephone contact could not be made, the interviewer went to the address indicated on the ES-511 Application Card.

The importance of maintaining the 14-day interval was stressed in the orientation of the interviewers, and substantial effort was expended to adhere to this standard. Interviewers were instructed to make two call-back attempts if the initial attempt was unsuccessful.

A detailed profile of the degree of success achieved in using this follow-up procedure is presented in Chapter 5. Out of 1023 Employment Service registrants who were designated as SLMI participants, 777 or 76 percent were successfully interviewed two weeks later. The 1023 cutoff was determined by projecting the first three month's follow-up interview completion rate over the entire program period with an objective of securing 800 completed questionnaires.

The First Follow-Up Questionnaire[1]

Since the recipients of the supplemental information were to be asked a series of questions pertaining to the use of the SLMI list itself, a different interviewing instrument was required depending upon whether the subject was in the control or experimental group. It was not considered feasible to have the interviewers specialize with one group because an efficient follow-up procedure requires the assignment of interviews to be based on geographic location. In addition, it was thought that the use of two entirely different questionnaire formats would be confusing and would increase the probability of irrevocable mistakes. Therefore, a common questionnaire was designed.

A project staff member located in the Employment Service office was responsible for the preparation and channeling of questionnaires to the interviewers. This staff person coded the cover sheet of the appropriate questionnaire to correspond to a name and address previously sent to the interviewers' supervisor to facilitate his scheduling procedure. In addition, the scheduled date of interview was indicated, as well as the date of the initial Employment Service interview which was entered in several places throughout the questionnaire to facilitate the interviewers' oral delivery style. Most important, though, was the listing of the eight firm names at the appropriate place on the experimental questionnaires, so the interviewer could explore specific action the subject had taken with regard to each one.

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[1] A copy of this instrument is included in Appendix C.

Even with these procedures which were designed to allay the registrants' fears about discussing their job-search activity, 52 out of the 1023 Employment Service registrants who had been identified as SLMI project participants, or five percent, refused to be interviewed. Reasons given for refusal ranged from a feeling of futility ("I'm going to be drafted tomorrow, so it doesn't matter,") to a concern for family harmony ("I would like to answer your questions but my wife doesn't think I should, so if my mother-in-law and wife both leave the house at the same time, I'll call you!").

The Second Follow-Up Questionnaire[1]

The second interview was conducted by telephone. This decision was made for three reasons. First, it was thought that whatever rapport existed between the participant and the SLMI project staff would be carried over to this interview. Therefore, on the one hand, if the subject did not object to being interviewed, it wouldn't matter what medium or technique of questioning was used. On the other hand, if he was annoyed, the annoyance would be expressed regardless of approach. It is held that there is a qualitative difference between initiating a first contact and subsequently renewing contact through the impersonal method of telephoning. Second, the lesser complexity of the second follow-up questionnaire made it much more amenable to completion by telephone. Also, the participants had already been confronted with similar kinds of questions, so the level of understanding would be expected to be higher. Third, and really contingent upon the correctness of the first two reasons, the telephoning technique is less expensive _assuming a similar quality of completion can be achieved_. This technique is, of course, limited to those who have access to telephones, but this is not a serious constraint even for the socioeconomic group dealt with in this project. Contact was frequently made through a friend or relative.

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[1] A copy of this instrument is included in Appendix C.

After a period of six weeks during which no contact of any kind was made with the subjects,[1] a total of 555 second follow-up interviews were completed. This number represents 71 percent of 777, the number of first follow-up interviews completed, and 54 percent of the 1023 initial participants. This second follow-up interview was the last contact made with the registrants who participated in the SLMI experimental program.

Employment Service During the Eight-Week Interval

The final step in the accumulation of data to be used in evaluating the SLMI experiment was to record all action taken by the Employment Service on behalf of a subject. A tickler file was maintained which indicated when the eight-week interval between the initial Employment Service interview and second follow-up interview was up. On this day the desired information was transcribed from the subjects' ES-511 Application Cards and compiled by code number for transmittal to the project director.

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[1] This does not mean that the subject had no contact with the Employment Service office. Every SLMI project participant received the normal services of the Employment Service. Therefore, if a job order was received for which an SLMI subject was qualified, he received a referral notice.

With the close of the operational part of the project three degrees of completion were represented in the participants' files. For the 246 subjects who were not interviewed two weeks after their initial Employment Service visit, only the two 5" x 8" project forms were available. This information was nevertheless coded and punched into data processing cards to permit subsequent analysis of the characteristics of these registrants who were not interviewed after a lapse of two weeks. For an additional 222 participants a completed first follow-up questionnaire and the Employment Service activity record were available, as well as the two project forms. Finally, for 555 applicants both first and second follow-up questionnaires had been completed, plus the Employment Service activity record and the two project forms.

IV

CONCEPTUAL CONSIDERATIONS

Several questions recur concerning the methodology of the SLMI experiment. They are:

1) Was it wise to use the closed employer-order file in the Employment Service office as the primary source of firm names and addresses for the SLMI list?

2) How important is the interdependence of experimental and control group behavior?

3) Did the giving of eight names and addresses of firms constitute increased knowledge of market conditions?

4) What degree of confidence can be placed in the data as accurately reflecting the behavior of the participants; that is, how sensitive was the testing methodology to answer the research hypotheses?

The SLMI List

The objective in developing the SLMI list was to have in hand a comprehensive cross-section of trade and industrial job opportunities in the Pittsburgh labor market area. If access could be had to staffing patterns for each firm, a random selection technique would result in the desired representative cross-section. However, staffing pattern information has not been available to public agencies since World War II, when it was collected for strategic planning purposes to avoid bottlenecks in production and to determine the impact of Selective Service procedures on employment flows. Therefore, an alternative method had to be found.

The possible use of the selective job description analyses which are conducted by the Employment Service was explored. These surveys are conducted at the request of a single firm or industrial group. After visiting one of the regional occupational research centers of the U. S. Employment Service, it was recognized that these data are too selective in coverage to have been of use.

The potential value of the D.O.T. itself was explored. In particular, the following idea was explored: The 1966 supplement to the Third Edition D.O.T., entitled Selected Characteristics of

Occupations (Physical Demands, Working Conditions, Training Time), would be used to compile a list of occupational (demand) characteristics associated with the major industries located in the Pittsburgh labor market area. A list of specific firms in each of these industries would also be compiled. An applicant's (supply) attributes would then be compared to the demand requirements and the most appropriate firm names would be selected. This procedure was held to be operationally infeasible because many applicants express an unwillingness to consider occupations substantially different from their past experience, even though they ostensibly qualify. For purposes of the SLMI project this expression of preference was accepted. This is not to say that an experimental attempt to broaden applicants' perspectives would not be useful under other circumstances.

Still another source of the SLMI was considered in consultation with the Chief, Division of Program Planning and Evaluation, Bureau of Labor Statistics. This agency is experimenting with methods to project occupational needs for public sector planning purposes. Data are available indicating the percentage representation of specific occupations in selected industrial classifications. The usefulness of these data were questioned because of the aggregate nature of the classifications and because inadequate project manpower was available to convert national percentage distributions into Pittsburgh area numerical distributions.

Finally, the Chamber of Commerce of Greater Pittsburgh was contacted as a possible source of staffing information, but they were unable to provide useful assistance.

After exploring these alternatives to the use of the closed employer order file in the Employment Service office itself, and faced with the basic constraint of being unable to seek information directly from employers, it was concluded that none was acceptable. Therefore, the basic source of SLMI became the historical use made of the Employment Service office. The importance of this source of information on the response of recipients and their success should not be overlooked. Several of the recommendations set forth in Chapter 9 are addressed to this aspect of the experimental program.

It was recognized from the beginning that this provided a non-random cross-section of trade and industrial employment opportunities in the Pittsburgh labor market. To reduce this bias an integral part of the SLMI list compilation involved the inclusion of occupational information secured from both the major (50 or more employees) and minor (all others) market employer records. A file is maintained on every employer in the Pittsburgh district who files unemployment insurance contributions, and who employs trade and/or industrial workers.

Specific information about individual job titles was secured from the major market employer records, although the currency of the demand requirements was questionable in some instances. The records of employers of smaller numbers of workers supplied less specific information, which was, therefore, of lesser value for project purposes.

The resulting SLMI list is undoubtedly skewed in the direction of an overrepresentation of large firms, particularly those that have previously used the Employment Service office. The significance of the latter point is explored in the next subsection.

Interdependencies of Supply and Demand

Conceive of the following situation: An applicant to the Employment Service office is given a list of eight firm names and addresses. He goes to one of the eight and accepts a job offer. Given the primary source of the SLMI list, it is possible that the employer would have filed a job order with the Employment Service office if this subject had not applied, in which case any qualified applicant might have been referred, not necessarily the one who had received SLMI, or even anyone who was participating in the experimental program. In other words, it is possible that the recipient of SLMI would take the job at the expense of another Employment Service registrant. The behavior of the SLMI recipients affects the demand for control group participants and other job seekers of similar ability. The relative importance of this interaction is virtually impossible to assess, except to indicate that only 523 men received SLMI, not all of whom made any contacts, let alone having contacted all eight firms on the list. Therefore, the probability of such an interaction actually having occurred is slight. A crucial question, of course, is whether the acceptance of eight firm names actually constituted an informational edge on those job seekers who had not received such a list. Attention is directed to this problem immediately below.

Did the SLMI List Constitute Labor Market Information?

Chapter 2 dealt with the concept of information as a valuable commodity which will be bought and sold at a positive price. A distinction was drawn between expected and realized value. The decision to acquire information is based on expected value. A distinction was also drawn between the initial action taken to acquire the information and subsequent decisions made to act, or not, on the basis of the expected payoff.

Admittedly these two stages are artificially separated parts of an integral whole--the decision making process through which a person acquires and uses information for personal benefit. However, the separation is of particular relevance for the SLMI experiment because the acts of information acquisition and use are expected to be differentially affected by certain attributes and environmental considerations unique to specific groups. For instance, applicants who walk in on their own volition have made a determination of the expected payoff to registration with the Employment Service. Another group of registrants, unemployment insurance claimants, must calculate the value of the UI benefits in calculating whether to register with the Employment Service, because failure to register may render them ineligible to receive benefits. Welfare recipients also must weigh the potential loss of the DPA payment against the cost of registering with the Employment Service.

The importance of these differences is this: the latter two groups, UI and DPA transfer payment recipients, receive a substantial immediate monetary payoff on their investment in registering with the Employment Service, whereas the voluntary registrants receive no such return.

Now assume that members of each of the three groups mentioned above receive supplemental information. This shifts attention to the second stage of the search process. The information has been acquired, what will now be done with it? The list constitutes an addition to the subject's knowledge of which firms in the Pittsburgh labor market employ people with his particular characteristics, with one important exception. Each participant in the experimental group was shown the list which the Employment Service interviewer had compiled for him, and he was asked if he had applied at any or was aware through other sources whether or not they were hiring. If he responded affirmatively to either question, the particular firm or firms mentioned were replaced. The possibility remains that the subject had no specific awareness of openings at one or more of the firms, but still ruled them out of consideration. Thus, the possibility exists that some firm names and addresses do not constitute new labor market information for some people.

To be conceptually correct it should be said that a registrant may look at the firm names and addresses, make a quick calculation of the probability and desirability of finding a job at each, and come up with none which has a positive expected payoff. In this general case the additional cost expected to be incurred to apply at each firm is greater than the expected return to doing so. This may happen both in cases where the applicant was previously aware that the firms hired people like himself, and in cases where he was previously unaware but is pessimistic about his chance of finding a job.

The essence of the above is that the SLMI list can be assumed to represent new knowledge with the one exception where the applicant rules firms out of consideration, but does so on criteria other than those used by the Employment Service interviewers for determining whether the information was truly supplemental. It is again emphasized that the Employment Service interviewers were instructed to normalize the manner in which the supplemental information was given. This constraint may have detracted from the effectiveness of the program.

Inaction, then, can be explained on either of two theoretical grounds: one, that the firms were known but not considered because of a negative expected return; and two, that the firms were not known but the expected payoff is nevertheless negative even with the new knowledge.

Accuracy of Follow-Up Interview Responses

The essence of hypothesis testing lies in the ability to ask the right questions and to secure the necessary information to answer these questions. In the case of the SLMI experiment the questions were virtually all asked of the Employment Service registrants themselves, and therefore, the confidence to be placed in the test is dependent upon the accuracy of the responses received.

There were very few instances where two sources of the same information were available, so that validation checks could be made. One important exception was the number of contacts made with potential employers through Employment Service referral as the source of information. This information was requested on both the first and second follow-up questionnaires, as well as being available on the activity record which was compiled for each participant.

During the first face-to-face follow-up interview in the subject's home he was asked, "Did you contact ANY employers, either by phone or in person, during the last two weeks in looking for a job?" If he responded affirmatively, he was asked how many firms he had contacted through each source. Those in the experimental group were then asked how many firms from the SLMI list they had contacted, providing one possible cross-check. Finally, after a series of intervening questions, the subject was told, "Let's review the number of firms you PERSONALLY visited in the last two weeks...how many did you visit altogether? How many firms did you visit that were on the list given you by the Employment Service?" Thus, several comparisons were available, although the alternatives were not independent sources of identical definition as one might hope to use to establish accuracy.

This concludes a long chapter which has presented the specific details of the design, operation, and evaluative technique used in the SLMI project. In many cases the basis upon which one method was chosen and others were discarded is spelled out in considerable detail in anticipation of questions beginning "Why didn't they try...?" Unavoidable weaknesses are discussed, as are possible dual explanations of a given phenomenon.

With this, attention is turned to Chapter 4, where a profile of the Pittsburgh labor market is presented.

CHAPTER 4

THE ECONOMIC ENVIRONMENT IN THE PITTSBURGH LABOR MARKET AREA (SMSA), JULY-DECEMBER 1967

INTRODUCTION

This chapter has a three-fold purpose. First, in Section I selected measures of economic activity in the Pittsburgh labor market area during the six-month time-span of the SLMI experiment are introduced. These measures are dichotomized into those indicative of area-wide activity, and those which measure only the activities within the Employment Service office itself. The latter indicators are, of course, not independent of the aggregate level of economic activity. Section II compares this economic environment with that faced by the Erie job seekers interviewed in the Sheppard and Belitsky study, and explores the significance of the differences noted. A third section is included to introduce the reader to the alternative sources of labor market information which are available to job seekers in the Pittsburgh area.

I

THE PITTSBURGH AREA ECONOMY

The Pittsburgh area is best known as one of the largest primary metals producing centers in the world, especially pig-iron and steel production and fabrication. In addition, nearly a third of the country's plate glass, a fifth of the window glass, and a sixth of the bottles and jars used are produced there.

Among the nationally known companies for which Pittsburgh is the headquarters city are the following: Aluminum Company of America, H. J. Heinz Co., Pittsburgh Plate Glass Company, Westinghouse Electric Corp., Jones & Laughlin Steel Corp., Rockwell-Standard Corp., Koppers Co., Inc., Consolidated Coal Co., Westinghouse Air Brake Co., United States Steel Corp., and Gulf Oil Company. In August 1966, the Chamber of Commerce of Greater Pittsburgh reported 19 manufacturing plants in Allegheny County alone (the core of the SMSA), each of which employed more than 1,000 employees, with a combined employment totaling 106,075 at that time.[1]

Employment levels regularly fluctuate in the primary metals production and fabrication facilities. The workers affected by these fluctuations are used to temporary layoffs. This is why there was some question in establishing the participant criteria about including workers who expect to be recalled to their last job. As was indicated in Chapter 3, the decision not to use recall expectation as a qualifying criterion was based on the desire to compare the activity of those who do expect to be called back to a previous job with the search effort of those who do not have such expectations. In fact, 83 of the SLMI project participants were actually recalled to previous jobs during the two months of the follow-up period, and these were eliminated from subsequent analysis.

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[1] Industrial Director, Information, the Chamber of Commerce of Greater Pittsburgh, August 1966, 14 pp. mimeographed.

Table 3 presents Employment Service estimates of the Pittsburgh labor market area labor force, employment, unemployment, and unemployment rate on a monthly basis over the four-year period January 1964-December 1967.

The general trend of activity in the Pittsburgh labor market area was favorable throughout the four-year span. The unemployment rate was at its highest point at the beginning of the period, with 7.9 percent of the labor force unemployed in January 1964. Four years later, in January 1968, the rate had fallen to 3.3 percent. Looking at a given month over the four-year period, it is found that while the seasonally adjusted level of activity increased during the first three years, unemployment increased during the Spring and Summer of 1967, immediately preceding and during the early months of the SLMI experiment. This is largely explained by several industrial disputes which indirectly affected large numbers of industrial workers.

Since it is the months of July-December 1967 that are of greatest interest, a month-by-month narrative explanation of the major factors influencing the labor market during that period is presented here, beginning with June 1967 and ending with January 1968.

TABLE 3: PITTSBURGH LABOR MARKET AREA (SMSA) LABOR FORCE, UNEMPLOYMENT AND EMPLOYMENT, MONTHLY 1964-67.

	(000's)						SLMI PROJECT PERIOD, 1967					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
LABOR FORCE (est.)												
1964	896	900	907	903	912	925	922	913	910	909	913	920
1965	903	901	905	914	921	938	934	932	927	918	924	930
1966	917	911	919	920	932	956	956	951	925	941	939	948
1967	932	932	936	942	951	964	949	945	945	943	940	946
EMPLOYMENT (est.)												
1964	825	831	839	848	861	870	873	872	875	874	877	885
1965	861	860	867	882	891	904	906	906	899	888	887	896
1966	879	875	890	895	908	926	929	927	923	918	914	922
1967	900	897	904	913	920	927	917	917	919	916	915	923
UNEMPLOYMENT (est.)												
1964	71	68	68	56	51	55	49	41	35	34	36	35
1965	42	42	38	32	30	34	29	26	28	29	37	34
1966	38	36	30	26	24	30	27	24	22	23	26	28
1967	31	34	32	29	31	37	32	28	26	27	25	23
UNEMPLOYMENT RATE (%)												
1964	7.9	7.6	7.5	6.2	5.6	5.9	5.3	4.5	3.9	3.8	3.9	3.8
1965	4.7	4.6	4.2	3.5	3.2	3.6	3.1	2.8	3.0	3.2	3.9	3.6
1966	4.2	3.9	3.2	2.8	2.5	3.1	2.8	2.6	2.4	2.4	2.7	2.7
1967	3.4	3.7	3.4	3.0	3.3	3.8	3.4	3.0	2.7	2.9	2.7	2.4

Source: ES-219 and ES-219C LABOR MARKET AREA reports, monthly 1964-1967.

June 1967: Employment increased even though more than 10,000 workers were idle due to construction strikes in the area and 800 were out of work because of a dispute in the electrical machinery industry. The primary metals industry added workers during the month. Unemployment increased because of the normal seasonal influx of students seeking summer jobs.

July 1967: Employment fell because of layoffs in the basic steel industry and the continuing shut-down of construction during what is normally the peak period for construction activity. The electrical machinery dispute was settled, but this was not enough to offset the other industrial and construction layoffs. The unemployment rate fell largely because discouraged summer job seekers dropped out of the market and were therefore not included in the measure of the unemployed.

August 1967: Employment increased because of increases in manufacturing, particularly the recall of 1,500 workers by two steel plants. The fabricated metals and transportation equipment industries reduced employment levels because of declining demand. Unemployment continued to decline because of student withdrawal from the labor force in anticipation of a return to school.

September 1967: With the settlement of the construction strike this industry quickly returned to peak levels of activity. Service and government employment increased as schools reopened, and trade employment increased because of hiring for fall sales. The unemployment rate was virtually unchanged from the previous month.

October 1967: Layoffs came in construction, basic steel, foundries and forgings, and zinc and copper processing. This resulted in a slightly higher unemployment rate, with almost one-fourth of the unemployment insurance checks issued during the month going to workers furloughed from steel plants.

November 1967: Primary metals increased employment slightly, but a dispute idled several hundred fabricated metals workers. The number of unemployed dropped slightly. Trade continued to be a strong factor in the market, but agricultural employment declined due to seasonal layoffs.

December 1967: Employment increased with all sectors showing strength, except agriculture. Both primary and fabricated metals recorded increases. Total estimated unemployment fell, but covered unemployment increased with the primary metal and construction workers idled by strikes accounting for most of the increase.

January 1968: All major sectors showed seasonal declines. The unemployment rate jumped from 2.4 percent to 3.3 percent of the area labor force. Covered unemployment increased by one-third over the previous month.

It is apparent from this survey of the level of economic activity during the three and one-half years immediately preceding the SLMI experiment, plus the six-month experimental period itself, that a general trend of increased activity was experienced with contract disputes softening the impact in specific industries and plants over short time segments. The importance of these measures of the aggregate level of activity for the SLMI experiment is two-fold. First, they are indicative of the demand environment in which the participants sought work. Second, they suggest the potential impact of changes in the demand for labor services on the number of applicants which flows through the Employment Service office. It is important, therefore, that the activity of the Employment Service office itself be presented here to complete the introduction to the economic environment in which the Employment Service registrants sought work.

Local Employment Service Office Activities

Eleven measures of activity in the local Employment Service office for the period July-December 1967 are displayed in Table 4. These numbers represent transactions in the local office and cannot necessarily be interpreted to represent individuals. Each of these is discussed in turn.

Active File: The active file refers to the stock of ES-511 Application Cards for all applicants who are considered to be eligible for review for possible referral or other services. This file is purged every other month to eliminate ineligible records. The number of active registrants remained nearly constant during the first part of the experimental program period, and then dropped by nearly one-fourth during the last few months. This is explained by the settlement of the disputes which had idled construction and primary metals workers for several months. The primary metals workers were indirectly involved in the truckers' dispute with steel plants, which resulted in inventory accumulations, production cut-backs, and subsequent layoffs.

New Applications: This measure represents the flow that transforms the active file stock. It is readily seen that the intake flow was nearly constant at 1,000 during July and August, fell by nearly 30 percent in September, and then increased again for the remainder of the period. The reasons for this pattern are, of course, those mentioned

TABLE 4: LOCAL EMPLOYMENT SERVICE OFFICE ACTIVITIES, JULY-DECEMBER 1967.
(ALL FIGURES ARE FOR MALES ONLY, UNLESS OTHERWISE NOTED)

Activity	Jul	Aug	Sep	Oct	Nov	Dec
Active File[1]	3,204	3,204	3,208	3,208	2,489	2,489
New Applications	1,048	1,012	722	848	885	846
Openings Received[2]	901	1,257	1,260	1,100	867	1,001
Openings Unfilled[3]	144	226	265	222	214	192
Referrals	1,610	1,730	1,641	1,561	1,098	1,499
Local[4]	1,573	1,662	1,585	1,434	1,098	1,479
On Sel. Notice[5]	419	663	663	581	342	410
Walk-in[6]	1,154	1,257	1,149	1,163	756	1,069
Placements	710	1,070	967	857	658	883
Local	699	1,070	967	857	636	828
Short-time[7]	149	206	197	194	169	128

Notes:

1 - includes all male registrants whose ES-511 Application Card is still 'active.' This file is purged bimonthly, therefore, identical figures are shown for two months.

2 - this is a demand measure which by law cannot specify sex. All employer orders received during the current month are included.

3 - this is also a demand measure not broken down by sex.

4 - this refers to the number of referrals made from local office registrants. The difference between this figure and 'referrals' is the number of referrals made by other local offices to fill openings filed with this office.

5 - this refers to the number of referrals necessitating a call-in of a registrant whose ES-511 was already in the active file.

6 - this refers to the number of registrants who were referred while they were in the office.

7 - this means the job was expected to last three days or less.

Source: ES-209, Local Office Activities, monthly reports July-December 1967.

earlier in explaining the varying active file level and the fluctuating level of aggregate economic activity in the Pittsburgh labor market.

Openings Received: This is one of two measures of demand included. It is a flow measure of the number of positions represented on employer orders received during the month (a single order may indicate 30 laborer openings for a steel plant, for instance). The number of applications filed (supply) and the number of openings received (demand) do not appear to have fluctuated in any related manner.

Openings Unfilled: This indicator measures the extent of nonconformity between supply and demand. Since the supply stock (active file) exceeds the demand stock (openings received plus previously filed but active orders), the existence of unfilled openings shown is indicative of a structural problem, at least within the Employment Service segment of the labor market. Other indications of this imbalance are explored below.

Referrals: This measure refers to the number of individual applicants who were sent to firms to apply for jobs filed by employers with the local Employment Service office. The number of referrals varied within rather narrow limits except for the month of November when it fell sharply. This is explained by the lesser number of days when the Employment Service office was operating due to holidays which fall in November (election day, Veterans Day, and Thanksgiving). The ratio of the number of referrals made to the number of openings received varied between 1.3 and 1.8 during the six-month period.

Local: Virtually all referrals were local, meaning that the individuals referred were selected from the particular Employment Service office intake, rather than pulling someone in from another office.

On Selection Notice: This indicator refers to those referrals which were made by calling applicants in whose ES-511 had previously been placed in the active file. The proportion of all referrals made which were accomplished by calling a registrant into the Employment Service office varied between 26 percent and 40 percent.

Walk-In: This measure refers to the number of referrals which were made while the applicant was in the office, either during his initial interview or when he came in on his own volition to check on openings. This category represents the difference between all local referrals and those made on selection notice. Again, for the same reason, the number remained nearly stable month by month, except for November.

Placements: Having referred an average of 1.4 registrants for each opening, how many placements were made? The proportion of placements made to openings received varied between 76 percent and 88 percent, and the proportion placements represented of referrals made varied between 44 percent and 62 percent.

Local: As with referrals, virtually all of the placements made had been drawn from the applicant file of the Employment Service office itself.

Short-Time: This is the last of the local office activity measures shown in Table 4. It indicates the number of placements made to jobs which were expected to last three days or less. The proportion of all placements represented by this group varied between 14 percent and 26 percent.

This table gives a comprehensive view of the general levels of Employment Service office activity, but it is equally important to explore the industrial and occupational mix of this activity. For this, attention is directed to a disaggregation of the placement information.

Occupational Distribution of Placements

Table 5 shows the distribution of placements made on a monthly basis by one-digit occupational classification, and within these one-digit categories by degree of complexity in the use of data (the fourth digit of the six-digit D.O.T. code).

Structural work occupations having no functional relationship to the use of data are seen to comprise 42 percent of the placements made during the six-month period. The structural work category as a whole accounted for half of all placements made, with the least complex machines trades jobs accounting for another 20 percent of the total. Combining all five one-digit categories and looking at the lowest level of specialization, it is seen that 90 percent of the placements fell into this group. This indicates that within the Employment Service sector of the labor market a matching of supply and demand occurs at this low level of specialization, and that so-called 'demand-occupations' are so designated because they require higher levels of supply specialization than are represented among the Employment Service registrants. Therefore, standing orders are maintained with the Employment Service office by some employers for particular skills. This does not imply that all registrants have only unspecialized work experience. Rather, it implies that many of the more specialized workers are merely on temporary layoffs due to contract disputes, seasonal production patterns, or uneven levels of demand, and are not referred to other employers for practical reasons.

TABLE 5: MALE INDUSTRIAL PLACEMENTS BY THE LOCAL EMPLOYMENT SERVICE OFFICE, JULY-DECEMBER 1967, BY ONE-DIGIT OCCUPATIONAL GROUPING AND THREE-WAY FOURTH-DIGIT CLASSIFICATION

Occupational Grouping	Jul	Aug	Sep	Oct	Nov	Dec	Six-Month Total	Percentage Distribution	Percentage Distribution of SMLI Population*
5 - Processing									
High**	-	-	-	1	-	2	3	-	1
Med	1	4	1	1	4	3	14	-	1
Low	13	50	21	26	32	137	279	6	9
6 - Machine Trades									
High	18	27	25	17	11	5	103	2	11
Med	2	3	1	6	10	1	23	1	5
Low	140	241	158	151	166	111	967	20	6
7 - Benchwork									
High	2	1	3	1	-	2	9	-	1
Med	3	-	-	3	2	1	9	-	-
Low	11	23	6	5	9	4	58	1	4
8 - Structural Work									
High	15	45	18	10	14	94	196	4	6
Med	27	24	18	11	1	6	87	3	2
Low	294	403	450	375	157	301	1,980	42	18
9 - Miscellaneous									
High	2	1	-	-	5	2	10	-	2
Med	4	-	1	4	4	1	14	-	2
Low	97	178	183	183	182	163	986	21	32
									(N=749)
Total Industrial Placements	629	1,000	885	794	597	833	4,738	100 percent	100 percent

*--this column represents a distribution of the primary D.O.T. codes for the 749 participants in the SLMI experimental program whose codes begin with the digits 5-9. This column does not indicate the placement of these registrants.

**--'High' includes (0,1,2,3), 'Med' includes (4,5,6,7), and 'Low' includes (8). These classifications refer to the 4th digit of the D.O.T. code, which represents the level of complexity in using data.

Source: ES-212, Nonagricultural Placements, monthly reports July-December 1967.

The last column on the right in Table 5 is included to compare the primary occupational preferences and abilities of the participants in the SLMI experiment with the distribution of placements made during the six-month tenure of the program. A greater concentration of supply 'skills' is found in the lowest level of specialization in the miscellaneous category, a full one-third of the 749 participants included. This grouping includes such jobs as light and heavy truck drivers and material handlers. These three classifications alone account for 17 percent of the SLMI applicants. While these comparisons indicate the occupational aspects of employer orders and registrant experience, an industrial distribution of placements is equally valuable in rounding out the picture obtained of Employment Service activities.

Industrial Distribution of Placements

The concentration of manufacturing placements in one industrial area clearly stands out above all else in Table 6. More than one-half of all manufacturing placements were in 'ordnance and accessories.' This represents nearly 30 percent of all placements made by the Employment Service office during the six-month period. On the other hand, only four percent of all placements were made in 'primary metals,' a surprisingly small proportion given the characteristics of the Pittsburgh economy.

Summary of Economic Activity Indicators

Several salient points should be reiterated before the reader moves on to compare the 1967 economic environment in Pittsburgh with the

TABLE 6: LOCAL EMPLOYMENT SERVICE OFFICE MALE PLACEMENTS, JULY-DECEMBER 1967, BY INDUSTRY*

	Jul	Aug	Sep	Oct	Nov	Dec	Total Six-Month Period	Percentage Distribution of Six-Month Manufacturing Total
Total Manufacturing	217	404	267	229	253	291	1,661	
Ordnance & Accessories	140	237	152	132	153	103	917	55
Food & Kindred Products	6	40	13	3	6	25	93	6
Tobacco Manufactures	-	-	-	-	-	-	-	-
Textile Mill Products	-	-	-	-	-	-	-	-
Apparel & Related Products	-	2	7	2	3	3	17	1
Lumber & Wood Products	-	3	2	1	-	-	6	-
Furniture & Fixtures	3	7	2	3	2	2	19	1
Paper & Allied Products	12	14	14	23	14	3	80	5
Printing, Publishing & Allied	5	4	1	1	2	2	15	1
Chemicals & Allied	6	7	6	10	8	8	45	3
Petrol, Refining & Related Ind.	1	1	-	-	-	-	2	-
Rubber & Misc. Plastics	-	8	7	2	1	9	27	2
Leather & Leather Products	3	2	-	-	-	-	5	-
Stone, Clay, & Glass Prod.	3	4	2	5	6	2	22	1
Primary Metals Industries	7	37	8	9	23	120	204	12
Fabricated Metal Prod.	8	14	21	3	12	5	63	4
Machinery (except elect.)	3	7	12	11	11	2	46	3
Electrical Machinery	15	11	9	17	12	5	69	4
Transportation Equipment	-	3	-	1	-	-	4	-
Instruments	1	1	8	4	-	2	16	1
Misc. Manufacturing	4	2	3	2	-	-	11	1
Contract Construction	279	401	422	372	146	386	2,006	
TOTAL, contract construction and manufacturing							3,667	

*--the total number of placements shown here is not the same as the totals in Table V because of non-comparable coverage.

Source: ES-212 Nonagricultural Placements, monthly reports July-December 1967.

1963-64 economic climate in Erie, where Sheppard and Belitsky conducted their study.

The general level of activity in Pittsburgh steadily improved during the three years immediately preceding the SLMI experimental period of July-December 1967, with some softening occurring during the Summer of 1967 due to contract disputes affecting contract construction, primary metals, and electrical machinery.

Activity in the local Employment Service office through which the SLMI program was carried out remained at a relatively stable level, with expected fluctuations due to seasonal factors and to the specific disputes mentioned above.

The 'ordnance and accessories' industrial classification is pointed out as the one aspect of the economic environment which may not be considered to be normal. The impact of the war in Vietnam is clearly evidenced here. However, it is not clear what differences would be evidenced in the Pittsburgh economy if such expenditures were to be reduced. There would undoubtedly be lesser demand in ordnance, but the primary metals industry and contract construction industries could readily absorb the supply made available by such cut-backs, if domestic consumption and investment increased.

II

ERIE, PENNSYLVANIA, 1963-64

One criterion for inclusion in the Sheppard and Belitsky sample was that an Employment Service registrant had to have actively sought work sometime between January 1, 1963, and March 31, 1964.[1] What kind of labor market did these job seekers face?

The Erie SMSA had a 1960 population of approximately 250,000 or one-tenth the number of people who lived in the four-county Pittsburgh SMSA at that time.

The following excerpts from Sheppard and Belitsky's book illustrate the pattern of economic activity in Erie in recent years:

> The period from World War II to the present is nearly equally divided between years of prosperity and heavy unemployment. Manufacturing employment attained its highest recorded level in May, 1953, but the 1950's were highlighted by the departure of several large firms.... Recent years of heavy unemployment were due largely to sharp declines in electrical and nonelectrical machinery .... However, despite significant losses in certain manufacturing industries, Erie's employment in that sector provided nearly 50 percent of nonfarm wage and salary jobs in 1963.... Between 1954 and 1964, the unemployment rate ranged from a high of 13.2 percent in 1958 to lows of 5.4 in 1956 and 5.9 in 1964.... Despite a relative improvement in total employment between 1962 and 1964, the absolute employment level was still considerably below that of 1953.... The ultimately forceful response to declining employment opportunities is illustrated in the volume of outmigration, which, during the years 1960-62 exceeded the total for the entire 1950-60 decade.... Despite the economic difficultities that beset Erie in 1954-63, the prospects are not altogether gloomy. One hopeful sign was the upturn of employment in manufacturing that began in the summer of 1964. In August of that year, the Erie unemployment rate declined to 4.9 percent in contrast with 7.6 percent in 1963 and 11.2 percent in 1959.[2]

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[1] Sheppard and Belitsky, op. cit., p. x.

[2] Ibid., pp. 4, 5, and 14.

The job seekers who were interviewed were looking for work during 1963 and the first quarter of 1964. Fourteen percent of these job seekers were white-collar workers and 37 percent were female.

A Comparison of the 1963-64 Erie and 1967 Pittsburgh Labor Market

Obviously, differences in economic climate confronted the two job-seeking groups. On the one hand, Erie had an unemployment rate which was nearly twice that found in Pittsburgh four years later, and more than one-third of the Employment Service registrants interviewed in Erie were females in a labor market which had eight years previously lost its major source of female employment, the General Electric refrigerator division which moved to Louisville, Kentucky in 1955. On the other hand, the Pittsburgh market with a high general level of activity was affected by contract disputes and uneven employment levels in the important primary metals production and fabrication industries. The registrants who participated in the SLMI study were all male blue-collar workers.

The relationship between level of economic activity and reliance on formal labor market intermediaries has been explored by a number of students of the labor market, perhaps most recently by Ullman and Taylor, who state that:

> As the market for an occupational group deteriorates, we would expect informal sources of information about jobs to become less effective. Random gate applications will turn up relatively fewer job openings when markets are loose than when they are tight. Similarly, sources of job information from friends and relatives will dry up since the unskilled job seeker will probably associate with people who are also unskilled and unemployed. It would seem unusual for unemployed job seekers to have

> information about openings to pass on to unemployed friends and relatives.[1]

The inference to be drawn is that a greater proportion of all job seekers would be expected to have registered with the Erie Employment Service office than with the Pittsburgh office, because of the relative weakness in the level of economic activity of the former. This suggests a qualitatively different supply mix in the two cases, quite apart from the inclusion of females and white-collar workers in the Erie study.

Not only does the search pattern of job seekers change, but so does the relative use of formal channels by employers. While the job seeker becomes more dependent on formal intermediaries during periods of slack demand, the employer becomes less dependent because he now has more applicants per opening through informal channels than before. The latter phenomenon is due to both an increase in the number of individuals seeking employment (supply) and a decrease in the number of openings (demand).

The significance of this comparison of the levels of economic activity in Erie and Pittsburgh lies in its contribution to the reader's awareness of the environmental context in which these and other studies have been conducted. Another aspect of this economic environment is the alternative channels of labor market information which are available to job seekers.

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[1] Ullman and Taylor, op. cit., p. 282.

III

ALTERNATIVE SOURCES OF INFORMATION

Private Sector Intermediaries

There are more than 100 private employment agencies and counselors listed in the yellow pages of the Pittsburgh telephone directory. Many of these are specialists dealing with a narrow spectrum of occupations. Some deal only in temporary employment. In fact, there is a private agency which specializes in temporary male placements located immediately adjacent to the entrance to the Employment Service office that cooperated in the SLMI project. These are all, of course, fee-charging agents who act as formal intermediaries between job seekers and employers for a price.

In addition to these private agents there are two other private sector formal intermediaries, unions and newspaper advertisements. Pittsburgh has one major evening newspaper that regularly carries a substantial listing of employment opportunities.

Recently, however, there has been a burgeoning number of public sector agencies, at least part of whose objective is to assist unemployed workers in finding jobs.

Public Sector Intermediaries

During the Summer of 1967 a Concentrated Employment Program (CEP) was instituted in Pittsburgh. The purpose of this new administrative unit was to provide an umbrella agency to oversee and coordinate the employment servicing functions of the Mayor's Committee on Human Resources (MCHR), the Human Resources Development Center of the Employment Service (HRDC-ES), the Department of Public Assistance (DPA), and the Opportunities Industrialization Center (OIC), which is actually a privately operated unit patterned after the widely acclaimed Philadelphia effort of the same name begun several years before by the Rev. Leo T. Sullivan.

It is apparent from this listing of cooperating agencies that the objective is to reach people who are not able to effectively seek employment on their own, even to the extent of applying to the Employment Service for placement. The OIC and DPA agencies in particular are involved in outreach programs to find unemployed people who need training or placement assistance. The Concentrated Employment Program itself was designed to more efficiently utilize the personnel and facilities of the cooperating agencies. For instance, the MCHR is involved in all phases of the anti-poverty program. The primary emphasis of its job placement program is on outreach, the coordination of existing training programs, and job development for placing the trainees. The Mayor's Committee also sponsors a few small training programs and attempts to place applicants in existing institutional and on-the-job training programs.

The Human Resource Development Center has essentially the same functions as the Mayor's Committee. An outreach program functions in the principal ghetto neighborhoods. These centers provide direct reference where possible. Applicants are secured through informal channels and local advertising in newspapers, on posters, and in church bulletins.

The largest training program conducted during this period was operated by the Westinghouse Learning Corporation. This program was established to provide jobs for 720 hard-core unemployed. It is to last for a period of eighteen months, with eight weeks of instruction for each applicant. There are three phases of the program: 1) remedial reading, writing and mathematics; 2) individual testing and counseling; and 3) pre-vocational (job attitude) skills. Trainees are then placed with an OJT employer who guarantees him employment after the training program.

Other organizations actively engaged in finding jobs for the unemployed are the Neighborhood Youth Corps (NYC), the Apprenticeship Information Center (AIC), the Urban League, the National Association for the Advancement of Colored People (NAACP), and the Office of Economic Opportunity (OEO). The Masonic Lodge and a few church groups also engage in limited placement activities. The NYC-ES is comparable to the HRDC-ES on a smaller scale, and serves a limited age group. Its placement activities are coordinated with the Employment Service. The AIC only provides information with regard to opening an apprentice training program to interested agencies, not direct placement into apprenticeships.

More recently a new coordinating organization designated CAMP, for Comprehensive Area Manpower Program, has been established to coordinate the efforts of state agencies concerned with the full utilization of the area's human resources.

Two points are in order concerning the role of these agencies in the labor market. First, units like the CEP and CAMP are essentially administrative innovations whose mission is to increase the efficiency and effectiveness of services already being performed. Similarly, the NYC-ES and HRDC-ES programs are administrative reorganizations designed to better carry out functions which have been carried out by the parent organization for years. The same holds true for the efforts of the OIC, Urban League, and NAACP, with the raison d'etre in this case being service to unemployed Negroes. The second point is that all of these agencies are in existence because not all of the unemployed are job-ready. This term is intended to describe those who have both the ability to do a job and the savvy to get a job. In some cases the need for employability services lies in a person's ineffectiveness in presenting himself to an employer rather than any need to acquire functional training.

With respect to the SLMI project, all participants in the program were judged by the Employment Service personnel to be job-ready, and therefore, not in need of these services. In a few cases a participant in the SLMI project did hear about one or more of these agencies, such as the HRDC-ES, and went there on his own volition. If he did, this information was recorded during the follow-up interview.

Summary

There are a large number of alternative formal labor market intermediaries which hold themselves open to serve job seekers in the Pittsburgh area. Some seek profit from placements made, some seek to profit from the advertisement of openings, some serve particular subgroups of the job-seeking population, and a few hold themselves open to all comers at no direct cost to the registrant.

Many of the recent changes in the hierarchy of agencies are administrative reorganizations which have had little impact on the individual job seeker. It is clear, however, that a large number of public and private agencies exist primarily, and in some cases solely, to place job seekers in satisfactory positions. The use that the job seeker makes of these alternatives, and their effectiveness in doing so, is explored in Chapter 6.

CHAPTER 5

PARTICIPANT CHARACTERISTICS

INTRODUCTION

This chapter describes the demographic and labor market related characteristics of the participants. This is accomplished in Sections I and II, below. It also explores differences in these same characteristics among those for whom follow-up interviews were, or were not, successfully completed. Section III is addressed to this issue.

The SLMI experiment was conducted in a single Employment Service office and included only male registrants who met three other criteria, so that a proper test could be conducted of the effect of supplemental labor market information on job-finding success. Nevertheless, elements of heterogeneity remain, most of them explicitly indentified to facilitate subsequent evaluation.

I

DEMOGRAPHIC CHARACTERISTICS

The characteristics of the experimental and control groups are revealed to be quite similar in Table 7. A few comments about specific elements of selected variable sets are appropriate, since the factors included in this table are those which have been used in the evaluation of the SLMI experimental program.

Negroes comprise slightly more than one-fourth of the total number of participants.

Those participants, either under 20 years old, or over 50, account for approximately 20 percent of the project population. This means that nearly 80 percent of the participants are in the primary labor force.

One-fourth of the participants had less than a tenth grade education, and another 25 percent had dropped out of high school. Of those who had graduated from high school, only 10 percent had acquired post-secondary training of any kind.

Only five percent of the participants were recipients of welfare payments, with the balance divided almost evenly between unemployment insurance claimants and voluntary walk-ins.

Two-thirds of the group were married at the time of participation, one-fourth were single, and the others were widowed, divorced, or separated. Nearly half of the participants had three or more dependents,where 'dependent' is defined to include the participant himself.

TABLE 7: SELECTED DEMOGRAPHIC CHARACTERISTICS OF THE SLMI PROJECT PARTICIPANTS, BY EXPERIMENTAL AND CONTROL GROUP STATUS

		Experimental		Control		Total	
		N	%	N	%	N	%
COLOR	White**	273	70	294	76	567	73
	Negro	117	30	93	24	210	27
	NA	-	-	-	-	-	-
AGE	<20	12	3	23	6	35	4
	20-25	98	25	80	21	178	23
	26-35	109	28	108	28	217	28
	36-50	125	32	101	26	226	29
	>50	43	11	75	20	118	15
	NA	3	1	-	-	3	1
EDUCATION	<10	101	26	101	26	202	26
	10-11	121	31	97	25	218	28
	12	148	38	174	45	322	41
	>12	20	5	15	4	35	5
	NA	-	-	-	-	-	-
STATUS	Voluntary Registrant**	191	49	139	36	330	43
	UI**	179	46	228	59	407	52
	DPA	20	5	20	5	40	5
	NA	-	-	-	-	-	-
MARITAL STATUS	Single	94	24	101	26	195	25
	Married	242	62	244	63	486	62
	Wid., Sep., Div.	54	14	42	11	96	13
	NA	-	-	-	-	-	-
NUMBER OF DEPENDENTS	None	4	1	4	1	8	1
	One	113	29	116	30	229	29
	Two	86	22	85	22	171	22
	Three or More	183	47	182	47	365	47
	NA	4	1	-	-	4	1
RESIDENCE IN COUNTRY	1 Year or Less	55	14	31	8	86	11
	>1 Year**	332	85	352	91	684	88
	NA	3	1	4	1	7	1
TOTAL N		(390)		(387)		(777)	

*--Experimental-Control difference significant at the .05 level.
**--Experimental-Control difference significant at the .01 level.

The overwhelming majority of the participants, nearly nine out of ten, have lived in Allegheny County for one year or more.

II

LABOR MARKET FACTORS

With respect to the labor market variables, Table 8 shows that a majority of the participants has been classified as 'non-specialized' in their work experience. This classification has reference to the 4th digit of the applicant's D.O.T. code and is intended to supersede the traditional skilled-unskilled format which previous studies have used.

Most of the registrants had involuntarily left their last job, usually as a result of layoffs, and over half of the total expressed some expectation to be recalled. Nevertheless, only 83 participants had been called back to work within the two-month period subsequent to their Employment Service registration date, and these were dropped from the analysis.

More than half of the participants had held two or more jobs during the two years immediately preceding registration with the Employment Service.

Each participant was asked what methods of job-search he had employed prior to Employment Service registration, where use is defined to mean that at least one employer was contacted through a

TABLE 8: SELECTED ASPECTS OF PARTICIPANT LABOR FORCE ORIENTATION, BY EXPERIMENTAL AND CONTROL GROUP STATUS

		Experimental		Control		Total	
		N	%	N	%	N	%
SKILL LEVEL 4th Digit-D.O.T.	Specialized*	137	35	90	24	227	29
	Not Specialized**	253	65	297	76	550	71
	NA	-	-	-	-	-	-
UNION MEMBER	Yes*	137	35	174	45	311	40
	No*	249	64	209	54	458	59
	NA	4	1	4	1	8	1
WHY LEFT LAST JOB	Voluntary	113	29	89	23	202	26
	Involuntary**	222	57	271	70	493	63
	NA	55	14	27	7	82	11
EXPECT RECALL	Yes	109	28	143	37	252	32
	No	222	57	190	49	412	53
	NA	59	15	54	14	113	15
JOBS HELD LAST 2 YEARS	None	23	6	4	1	27	3
	One	176	45	182	47	358	46
	Two or More	191	49	201	52	392	51
	NA	-	-	-	-	-	-
SEARCH METHODS USED PRIOR TO ES REGISTRATION	Direct Application Without Prior Knowledge of Openings	214	55	217	56	431	48
	Friend or Relative	140	36	104	27	244	27
	Private Employment Agency	16	4	12	3	28	3
	Newspaper Advertisement	86	22	89	23	175	19
	Other	16	4	12	3	28	3
	NA	-	-	-	-	-	-
TOTAL N		(390)		(387)		(777)	

Note: The number of participants who used all search methods combined does not total 777 because any given participant could have used more than one search technique.

*--Experimental-Control difference significant at the .05 level.
**--Experimental-Control difference significant at the .01 level.

given channel. More than half of the participants said they had applied to at least one firm on their own without prior knowledge of openings. One in three had followed up on a lead from a friend or relative. More than 20 percent had applied at least once on the basis of a newspaper advertisement. Finally, less than five percent has received a referral either from a private employment agency or from one of the 'other' sources, such as unions, churches, or social welfare organizations.

III

DEGREES OF PARTICIPATION

Introduction

Attention in this section is focused on the characteristics of those who are classified by three different levels of participation--Employment Service only, completed first follow-up interview, and completed second follow-up interview. There are two reasons for following this procedure. One is to indicate selected demographic characteristics of those who were *not* interviewed after a lapse of two weeks, and to compare them with the characteristics of those who were successfully interviewed. The second is to compare the two-week and eight-week interval populations, the latter being a sub-set of the former, for the purpose of discovering possible differences in characteristics that might be expected to effect the findings reported in subsequent sections.

Non-Participant Characteristics

The distribution of individuals who were not successfully interviewed two weeks after the initial Employment Service registration date differs from those who were interviewed, as shown in Table 9. The proportion of the total who are Negroes, for example, decreases through time, (through each level of participation). This means that the Negro participants were more difficult to find or carry through a successful completion of the questionnaires. This finding is consistent with the observations of other analysts who have experienced greater difficulty in achieving Negro participation in follow-up situations as compared to whites.

Similarly, the proportion of those who are widowed, separated, or divorced is higher among the non-completion group than either the two- or eight-week follow-up populations. This relationship is reinforced by the finding that non-heads-of-household represent two-thirds of those who dropped out, and less than 30 percent of the groups which completed follow-up interviews. The same relationship is found for the number of dependents; the participants who were only supporting themselves are more likely to have dropped out.

Each of these differences leads to the conclusion that those with the least reason to have a strong attachment to the labor force were more likely to be the ones who are not included in the analysis which follows.

The reasons given by the interviewers for not completing assigned first follow-up interviews have been tabulated and are presented in Table 10 below.

TABLE 9: SELECTED DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS, BY EXPERIMENTAL AND CONTROL GROUP STATUS AND PARTICIPATION LEVEL.[†]

	EXPERIMENTAL						CONTROL						TOTAL*					
	1		2		3		1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
COLOR																		
White	75	57	273	70	190	71	76	69	294	76	223	80	151	63	567	73	413	76
Negro	57	43	117	30	78	29	33	30	93	24	53	19	90	37	210	27	131	23
NA	--	--	--	--	--	--	1	1	--	--	3	1	1	--	--	--	3	1
MARITAL STATUS																		
Single	37	28	94	24	62	23	34	31	101	26	75	27	71	29	195	25	137	25
Married	65	49	242	62	172	64	56	51	244	63	179	64	121	51	486	63	351	64
Widowed, Separated, Divorced	30	23	54	14	34	13	19	17	42	11	25	9	49	20	96	12	59	11
NA	--	--	--	--	--	--	1	1	--	--	--	--	1	--	--	--	--	--
HEAD OF HOUSEHOLD																		
Yes	44	33	277	71	196	73	40	36	283	73	198	71	84	35	560	72	394	72
No	88	67	113	29	72	27	70	64	104	27	81	29	158	65	217	28	153	28
NA	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--
NUMBER OF DEPENDENTS																		
None	--	--	8	1	--	--	1	1	4	1	3	1	1	--	12	2	3	1
One	55	42	113	29	78	29	43	39	116	30	86	31	98	40	229	29	164	30
Two	24	18	86	22	56	21	14	13	85	22	62	22	38	16	171	22	118	22
Three or more	51	39	183	47	129	48	52	47	182	47	128	46	103	43	365	47	257	46
NA	2	1	--	--	5	2	--	--	--	--	--	--	2	1	--	--	5	1
TOTAL N	(132)		(390)		(268)		(110)		(387)		(279)		(242)		(777)		(547)	
RESPONSE RATE			.75		.51				.78		.56				.76		.54	

[†]--1--Employment Service interview only
2--First follow-up
3--Second follow-up

*--The total number of participants included here is 1019 rather than 1023 because the records for four participants are incomplete.

TABLE 10: REASONS GIVEN FOR NOT COMPLETING FIRST (TWO-WEEK) FOLLOW-UP INTERVIEW

	Experimental		Control		Total	
	N	%	N	%	N	%
Could not find at home (three attempts)	53	(40)	37	(34)	90	(37)
Refused to be interviewed	27	(21)	26	(24)	53	(22)
Moved and left no forwarding address	21	(16)	16	(15)	37	(15)
No such address or subject never lived there	10	(8)	10	(9)	20	(8)
Moved out of labor market area	11	(8)	10	(9)	21	(9)
No reason given	8	(6)	6	(5)	14	(6)
Other	2	(1)	5	(4)	7	(3)
TOTAL	132	(100)	110	(100)	242	(100)

Seventy-eight of the original 1023 participants who had registered with the Employment Service two weeks before had moved and left no forwarding address, had moved out of the labor market area, or never lived at the address given. This means that one out of every ten Employment Service registrants could not have been located even if a job opening had come up in the Employment Service office. The significance of this in terms of Employment Service efficiency should not be overlooked.

Two- and Eight-Week Population Differences

Returning to Table 10, it is clear that the distribution of participants on the basis of the factors shown does not differ for the two time periods. This relationship was also found for other variables that are not shown. The smaller eight-week population appears to be a representative sub-set of the two-week group. However, caution is urged in the interpretation of the eight-week data because the response rate was only .54, indicating that nearly half the original participants had dropped out by the end of the two-month follow-up period.

CHAPTER 6

JOB-SEARCH BEHAVIOR AND SUCCESS: A FIRST VIEW

INTRODUCTION

Three questions are paramount. Did the participants in the experimental group use the list of eight firm names and addresses? Did they more actively engage in a search for work through other channels? And, were the experimental group registrants more successful in securing employment? These questions and other selected aspects of the job-search behavior and success of the participants in the SLMI experiment are explored in the following pages.

This chapter is restricted to a description of the job-search activity and success of recipients and non-recipients of supplemental labor market information. However, this approach does not allow isolation of the net effect of one factor while controlling for the effects of other factors. Since the objective is to assess the net effect of supplemental information on job-search behavior and success, such a controlled evaluation must also be conducted. This will be done in Chapter 7, by utilizing multiple regression techniques.

This chapter is segmented into five sections. Section I is addressed to the question, "Did the recipients of an SLMI list use it?" Section II compares the comprehensive job-search activity of the participants who received supplemental labor market information with the activity of those who did not. Section III presents a detailed exploration of the relative job-finding success of the participants. Section IV presents a comparison of the average length of unemployment of selected sub-groups of the total participant population. Finally, Section V provides a chapter summary.

I

USE OF THE SLMI LIST

During the six-month period July-December 1967, a total of 523 Employment Service registrants were given an SLMI list. Each list was tailor-made for an individual recipient. Nevertheless, the primary emphasis was placed on the number of names given rather than on equalizing the value of supplemental information received by each participant. This point is essential to an understanding of the evaluation which follows. For instance, an attempt could have been made to determine whether, say, three names given to applicant A were of equal value to eight names given to applicant B. However, this procedure would have necessitated unreasonable assumptions about the ability of Employment Service interviewers to determine informational value. In addition, the complexity which this procedure would have introduced into the evaluation of the experiment would have been massive.

Usable two-week follow-up interviews were conducted with 390, or 75 percent, of the original 523 participants, and an additional 26 participants were eliminated from subsequent analytical steps because they were recalled to previous jobs during the two-week interval following registration with the Employment Service. Thus, the description which follows refers to the 364 participants in the experimental group and 362 participants in the control group who were successfully interviewed two weeks after registration and who had not been recalled to previously held jobs. In addition, the behavior of the 232 recipients of an SLMI list and 253 control group registrants (not including recalls) who were successfully interviewed eight weeks after registration with the Employment Service is explored. Since all of the latter participants had completed the first follow-up interview, so this eight-week group is a subset of the larger two-week one.

Nonusers of the SLMI List

Two weeks after having received an SLMI list, 57 percent had not personally contacted any of the listed firms. Each participant who said he had not contacted any of the firms was asked why. The answers are presented in Table 11.

It is recognized that the reasons stated may not always be accurate reflections of the internalized reason why the participants did not attempt to contact any of the eight firms suggested.

One out of every five nonusers declined to specify why he had not used the list.

TABLE 11: REASONS GIVEN BY EXPERIMENTAL GROUP PARTICIPANTS FOR NOT USING THE SLMI LIST DURING THE FIRST TWO WEEKS

	N	% of All Nonusers	% of Those Giving Reasons
No Specific Reason Given	40	(19)	
Transportation Difficulties	45	(22)	(27)
Expected Recall	20	(10)	(12)
Telephoned One or More Firms Instead	17	(8)	(11)
Accepted a Job Offer Through Another Channel	14	(7)	(8)
Received a Referral Card from the Employment Service	14	(7)	(8)
Knew Firms Would Not Hire	12	(6)	(7)
Looking for a Different Kind of Work	10	(5)	(6)
Haven't Yet, but Intend to	10	(5)	(6)
Misinterpreted Employment Service Interviewer's Instructions	11	(6)	(7)
Other	14	(7)	(8)
TOTAL	207	(100)	(100)

An equal proportion attributed their inactivity to anticipated difficulties in transportation. It should be noted however, that the presence of both a car and a driver's license was not found to be significantly related to either success in finding a job or the duration of unemployment. These findings are discussed in Chapter 7.

One-third of those who did not make any use of the SLMI list gave reasons which reflected their reliance on alternative channels of information. It is important to recognize that those who expected to be recalled had not been as of the interview date. This brings into question the adequacy of the identification procedures currently being used to determine what registrant services are relevant. More significantly perhaps it again raises the frequently observed phenomenon of inelastic expectations with regard to reemployment probabilities.

The remaining nonusers who gave specific reasons can be grouped as having inadequately communicated with their Employment Service interviewer. Since this group represents one-fourth of the total number who did not use the list, several observations are in order. First, 17 participants telephoned one or more of the firms listed to see if openings did exist. This was done despite the admonition of the Employment Service interviewers not to use the telephone because of the bad impression this might have on an employer. In light of the theoretical considerations explored in Chapter 2 with regard to the expected value of information being the determinant of action taken, it is not surprising that the job seekers attempted to verify the presence of an opening before incurring the expense of personally visiting a firm. This also implies, however, that if greater confidence was placed in the content of the list as a source of job openings this probing effort could be reduced. Secondly, 12 recipients of a list said they had not used it because they knew the firms were not hiring. This contradicts their initial statement to the Employment Service interviewer, when they were first given the list, that they had not contacted any of the eight firms shown and did not know whether or not they had openings. It is conceivable, of course, that the participants checked with their friends after receiving the list and were told that the firms listed were not hiring. Another ten registrants who did not use the list said that they were looking for a different kind of work other than that to which the list was directed. Finally, 11 applicants thought that the Employment Service would contact them when an opening occurred with a listed firm, or that the firms would contact them directly.

One inference which can be drawn from this breakdown of why the SLMI list was not used by 57 percent of the participants is that the dialogue between job seeker and Employment Service interviewer is a crucial aspect of the potential usefulness of general labor market information. The expected value of the information will determine whether the list will be used, and this expected value depends largely on the delivery technique used to transmit the list.[1]

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[1] This is not intended to be a criticism of the performance of the Employment Service interviewers who carried out the SLMI program. They followed explicit instructions about what to say according to the design of the experiment. Thus, with a smaller number of constraints being placed on what he can say to a job seeker, an interviewer can undoubtedly instill a greater degree of enthusiasm in the recipient of the information.

Users of the SLMI List

A total of 444 personal contacts were made during the first two weeks with firms on the SLMI lists by the 156 participants who were given lists and who had used them. More than three-fourths, or 335, of this number of contacts were made by job seekers who did not find jobs during the two-week interval. However, this should not be interpreted as evidence that those who did not get jobs made greater use of the list than those who did find jobs, because the 70 percent of the participants who did not get jobs made 75 percent of the contacts.

During the third through the eighth week after Employment Service registration an additional 27 recipients of an SLMI list used it for the first time. This indicates that some job seekers preferred to rely on other sources of information first and resorted to the supplemental information at a later date. In fact, these 27 job seekers made a total of 58 contacts with employers through other channels during the initial two-week period. This is a behavior pattern which can be anticipated because labor market information is arrayed along a quality continuum from high to low, and the SLMI list consists of information of a lower quality than some other types.

The use of the list of firms has been determined up to this point on the basis of the participant having made one or more personal contacts with a listed employer. What proportion of the participants in the experimental group made how many contacts on the basis of the SLMI list? (See Table 12.)

One-third of those who received an SLMI list made one, two, or three contacts with listed firms, while only ten percent made four or more contacts from the list. Again, this is not surprising in light

TABLE 12: NUMBER OF PERSONAL CONTACTS MADE WITH FIRMS ON THE SLMI LIST, FIRST TWO WEEKS

Number of Contacts Made Using the SLMI List	N	%	Users as a Cumulative % of Total Recipients
None	207	(57)	--
One	47	(13)	(13)
Two	39	(11)	(24)
Three	31	(9)	(33)
Four	10	(3)	(36)
Five	5	(1)	(27)
Six	11	(3)	(40)
Seven	3	(1)	(41)
Eight	9	(2)	(43)
TOTAL	362	(100)	(257)

of the conceptual framework set forth in Chapter 2, which indicates that the expected value of the list to a given job seeker depends largely on the alternative sources of information open to him. If he contacted one or two firms shown on the SLMI list, and was unsuccessful in finding a job, it is likely that he would discount the value of the remaining names. Of course, if he were successful at the first or second attempt he would not have to make any additional contacts.

Among the 43 percent who used the list, an average of 2.8 contacts were made during the first two weeks of search after receiving the list.

A question was raised whether the recipients might show the list to other job-seeking friends, thereby introducing a multiplier effect into the picture. If such a phenomenon was occurring it would, of course, mean that the number of contacts made through the use of the list would be understated if attention was restricted to the original recipients. Therefore, the participants who had received lists were asked if they had shown the list to anyone, and if so, to how many people. No attempt was made to contact these secondary participants to see if they had actually contacted any firms. A tabulation of the responses to this question shows that 19 participants out of 172 responding showed (or gave) the list to a total of 41 other job seekers. In other words, the number of job seekers who might have knowledge of the contents of the SLMI lists which were given is substantially larger than the original participating group.

What are the socio-demographic characteristics of those who used the list in comparison to those who did not? If significant differences in use are observed between identifiable groups, it is possible that target groups can be identified as potential beneficiaries of the SLMI procedure.

Table 13 shows the number of contacts made from the SLMI list on the basis of color, age, education, status, and skill. Little difference is observed in the pattern of use on the basis of any of these factors shown independently. The older job seekers, age 51-65, appear to have made somewhat greater use of the list, but virtually no difference is apparent between Negro and white use, or between voluntary registrants and unemployment insurance claimants. Similarly, those with specific skills made just as much use of the list as did those with nonspecific work experience and ability.

TABLE 13: NUMBER OF CONTACTS USING SLMI LIST, FIRST TWO WEEKS, BY COLOR, AGE, EDUCATION, STATUS, AND SKILL.

Number of Contacts Made Using SLMI List	COLOR				AGE						EDUCATION				STATUS						SKILL			
	Negro		White		18-25		26-50		51-65		<12		12 or more		UI		DPA		Voluntary Registrant		Specific		Non-Specific	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
None	60	(52)	147	(58)	63	(60)	125	(58)	17	(41)	108	(53)	97	(62)	91	(59)	9	(42)	105	(57)	75	(60)	132	(56)
One	15	(13)	32	(13)	14	(13)	28	(13)	5	(12)	28	(14)	19	(12)	22	(14)	3	(14)	22	(12)	17	(13)	30	(13)
Two	15	(13)	24	(10)	10	(10)	24	(11)	6	(14)	24	(12)	16	(10)	13	(8)	4	(19)	23	(13)	14	(11)	26	(11)
Three	9	(8)	22	(9)	9	(9)	19	(9)	3	(7)	22	(11)	9	(6)	16	(10)	1	(5)	14	(8)	7	(6)	24	(10)
Four	3	(3)	7	(3)	3	(3)	4	(2)	3	(7)	6	(3)	4	(3)	4	(2)	-		6	(3)	6	(5)	4	(2)
Five	3	(3)	2	(1)	2	(2)	2	(1)	1	(2)	3	(1)	2	(1)	3	(2)	1	(5)	1	(1)	1	(1)	4	(2)
Six	4	(4)	7	(3)	1	(1)	6	(3)	4	(10)	5	(2)	6	(4)	4	(2)	2	(10)	5	(3)	3	(2)	8	(3)
Seven	-	-	3	(1)	1	(1)	1	-	1	(2)	1	-	2	(1)	1	(1)	-		2	(1)	2	(1)	1	
Eight	4	(4)	5	(2)	1	(1)	6	(3)	2	(5)	8	(4)	1	(1)	4	(2)	1	(5)	4	(2)	2	(1)	7	(3)
N	113	(100)	249	(100)	104	(100)	215	(100)	42	(100)	205	(100)	156	(100)	158	(100)	21	(100)	182	(100)	127	(100)	236	(100)

Summary of SLMI List Use

Of the 364 participants who had received supplemental labor market information and were interviewed two weeks later, 156, or 43 percent, had made one or more personal contacts with employers from the lists within the two-week period. These 156 participants who used their SLMI lists made a total of 444 contacts with employers from the lists during the first two weeks after registering with the Employment Service. An additional 22 participants who had not used the SLMI list during the initial two-week period, did so during the subsequent six weeks.

One out of every five of the 207 participants who received, but did not use, an SLMI list cited transportation difficulties as the single most important reason. Another 25 percent of the nonusers gave reasons which indicated a misunderstanding of their conversation with the Employment Service interviewer. Another one-third had found, or expected to find, jobs through other information channels.

One-third of the participants who received an SLMI list made one, two, or three contacts with listed firms, and ten percent made four or more contacts. Among the 43 percent who used the list, an average of 2.8 personal contacts were made with listed firms during the first two weeks of search.

II

COMPREHENSIVE JOB-SEARCH ACTIVITY

As stated, the experimental group participants made 444 contacts with employers from the SLMI list during the first two weeks of search after registering with the Employment Service. Does this number represent a net increase over and above the number of contacts they would have made if they had not been given supplemental information? To answer this question information is required on what use the applicants in the experimental group made of other channels or sources of information, and what job-search activity the applicants in the control group engaged in. This information is presented in Table 14.

TABLE 14: NUMBER OF CONTACTS MADE THROUGH EACH SOURCE OF INFORMATION, FIRST TWO WEEKS, BY GROUP

	Experimental			Control	
	N	%	% of Non-SLMI Contacts	N	%
SLMI List	444	(31)	--	--	
Application Without Prior Knowledge of Openings	386	(27)	(39)	459	(45)
Friends and Relatives	243	(17)	(25)	243	(24)
Newspaper Advertisements	238	(17)	(24)	214	(21)
Employment Service Referral	87	(6)	(9)	90	(9)
Private Employment Agency	29	(2)	(3)	14	(1)
TOTAL NUMBER OF CONTACTS	1427	(100)	(100)	1020	(100)

Two important observations can be made. First, the contacts made through the SLMI list represent almost entirely a net increase in job-search activity. A total of 407 more contacts were made by participants in the experimental group than were made by those in the control group. Second, only one channel was used differentially by the two groups--direct application without prior knowledge. The participants who received supplemental information appear to have substituted to some extent contacts from the list for direct application with no knowledge. In other words, they substituted the general information contained in the list for the no prior knowledge technique of job-search. This is consistent with the view that the list did constitute additional information of positive expected value to (at least some of) those who received it.

During the subsequent six-week period the participants who had received SLMI lists but had not found jobs made an average of 8.0 contacts during the six-week period, compared with an average of 5.7 contacts made by non-recipients of supplemental information.

III

JOB-FINDING SUCCESS OF THE PROJECT PARTICIPANTS

Table 15 shows the relative success of the two groups of job seekers in locating employment during the two months following Employment Service registration. The relevant population here includes

TABLE 15: EIGHT-WEEK JOB-SEARCH SUCCESS, BY COLOR

	EXPERIMENTAL			CONTROL		
	N	% of Those Who Got A Job	% of All Respondents	N	% of Those Who Got A Job	% of All Respondents
ALL						
Got A Job, Two Weeks	76	(56)	(33)	65	(53)	(26)
Got A Job, Six Weeks	60	(44)	(26)	57	(47)	(22)
Got A Job, Eight Weeks	136	(100)	(59)	122	(100)	(48)
Did Not Get A Job	96		(41)	131		(52)
TOTAL	232		(100)	253		(100)
NEGRO						
Got A Job, Two Weeks	17	(47)	(24)	6	(40)	(12)
Got A Job, Six Weeks	19	(53)	(27)	9	(60)	(19)
Got A Job, Eight Weeks	36	(100)	(51)	15	(100)	(31)
Did Not Get A Job	35		(49)	33		(69)
TOTAL	71		(100)	48		(100)
WHITE						
Got A Job, Two Weeks	59	(59)	(37)	59	(55)	(29)
Got A Job, Six Weeks	41	(41)	(25)	48	(45)	(23)
Got A Job, Eight Weeks	100	(100)	(62)	107	(100)	(52)
Did Not Get A Job	61		(38)	98		(48)
TOTAL	161		(100)	205		(100)

only those for whom a complete file, consisting of both first and second follow-up interviews, was obtained.[1]

Fifty-nine percent of the participants who received supplemental information and were interviewed eight weeks later had found jobs, compared with 48 percent of the participants in the control group. One-third of the experimental group registrants had gotten jobs within the first two weeks after registration with the Employment Service, compared with one-fourth of the applicants in the control group. In other words, a larger proportion of the participants who had received SLMI found jobs, and they found them sooner on the average, than those in the control group.[2]

When the participants are separated by color, important differences were found. On the one hand, one-half of the Negroes who were interviewed and had received SLMI had found jobs within the eight-week period, compared with 31 percent of the Negroes in the control group. On the other hand, half the whites in the control group had found jobs, and 62 percent of the whites interviewed who had received SLMI were employed. In other words, the same proportion of Negroes who received supplemental information found jobs as did whites without additional information.

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[1] For instance, 108 participants in the experimental group who were interviewed in their homes two weeks after registering with the Employment Service reported that they had found jobs during the two-week interval. However, only 76 of these registrants completed second follow-up interviews six weeks later, and are therefore included in Table 15.

[2] No mention is made here of the kinds of jobs secured. A tabular listing of job titles by control and experimental group, and by two- or subsequent six-week period, is presented in Appendix B.

The fact that more than two-thirds of the Negroes in the control group, and one-half of the Negroes in the experimental group, had *not* found jobs within the eight-week period should not be lost in this analysis.

The time-period during which job-search behavior is studied influences the observed relationships. For instance, the proportion of the eight-week population which found jobs during the first two weeks is higher than *the same measure* for the participants included in the larger two-week population. Caution is urged, therefore, in comparing the two- and eight-week populations.

Through what sources of information or labor market channels did the successful job seekers secure their jobs? The participants in the experimental group made more contacts, largely because of their use of the SLMI lists as a source of labor market information, and those who received the lists were more successful in finding jobs during the two-month period. Can it be concluded, therefore, that the job seekers in the experimental group were more successful in locating employment *because of* the list? The answer to this question is complex. Table 16 shows the distribution of the successful job seekers by how they first heard about the job opportunities.

Only six recipients of an SLMI list credited their success in finding jobs to contacts made from the list. During the first two weeks of search after receiving the list, four jobs were obtained out of 444 contacts--a success ratio of one percent.

Why did so few active job seekers find employment using this technique? Unfortunately, no information about the demand side of the labor market was obtained directly in this project, therefore speculative

TABLE 16: SOURCE OF INFORMATION LEADING TO THE ACCEPTANCE OF A JOB, FIRST TWO WEEKS AND SUBSEQUENT SIX WEEKS

	Two Week				Six Week*			
	Experimental		Control		Experimental		Control	
	N	%	N	%	N	%	N	%
SLMI List	4	(4)	-	(-)	2	(4)	-	(-)
Application Without Prior Knowledge	21	(20)	9	(11)	9	(16)	10	(19)
Friend or Relative	29	(28)	21	(26)	18	(33)	21	(40)
Newspaper Advertisement	14	(13)	16	(20)	7	(13)	7	(13)
Employment Service Referral	28	(27)	22	(28)	7	(13)	9	(17)
Private Employment Agency	5	(5)	1	(1)	4	(7)	-	(-)
Other	3	(3)	11	(14)	8	(14)	6	(11)
TOTAL	104	(100)	80	(100)	55	(100)	53	(100)

*--includes only those who had not gotten a job during the first two weeks after Employment Service registration, did find one during the third through eighth week, and were interviewed at the end of the eighth week.

hypothesizing about why the job seekers were unsuccessful to the extent observed must remain just that. However, those who attribute the low success ratio to an absence of knowledge about openings at the listed firms miss the essential point of the experimental program. The purpose in conducting the experiment was precisely to see if successful placement could be achieved without specific knowledge of existing openings. If so, the resources devoted to acquiring such information could be (at least partially) reallocated to other uses.

If the job finders did not use the list successfully, how did they locate jobs? Referring to Table 16 again, it is seen that more than one-fourth of those in both the experimental and control groups who found jobs during the first two weeks got them through a specific referral to an employer from the Employment Service. This brings up a controversial point. Should these participants have been eliminated from the analysis for the same reason that those who were recalled to previous jobs were excluded? Does not the fact that they were referred to specific job orders filed by employers with the Employment Service mean that they would not be expected to have used the SLMI list?

This problem was anticipated in the design of the experimental program. *If a referral was made on the day of the Employment Service interview the registrant would not be considered eligible for participation in the SLMI project. However, once a job seeker was accepted into the project population he was not to be denied any of the regular services that he would have received in the absence of the experiment, no matter which group he was placed in.* Otherwise, the role of supplemental information as an operational tool would not have received a proper test. Thus, if a job order for which a participant was qualified came in during the eight-week interval following Employment Service registration he received the referral. Two points can now be made. First, since some time elapsed between the day the SLMI list was received and the day the specific referral was made, the participant could have made some contacts using the list as a reference. Second, the recipient of a referral from the Employment Service differs only in degree, not kind, from reading an appropriate newspaper advertisement, or hearing about an opening from an acquaintance or relative.

The participants were not, and should not have been, isolated from alternative sources of labor market information. To exclude those who had access to a single channel would have been operationally unwise and theoretically improper.

Returning again to Table 16, it is seen that another one-fourth of those who found jobs during the first two weeks heard about the openings through friends or relatives. Newspaper advertisements and direct applications without prior knowledge accounted for another one-third of the successful contacts.

The only apparent differences between those channels which were used successfully to find a job during the initial two-week period as opposed to the subsequent six weeks are in the proportion of all placements represented by Employment Service referrals (smaller during the six-week period), and reliance on friends and relatives (greater during the six-week period). These relationships are consistent with the theoretical expectation that the probability of getting a referral from the Employment Service declines over time because of the largely constant mix of the kinds of positions for which employers seek Employment Service help, and the expected job-seeking behavior pattern of relying more heavily on informal channels after exhausting the potential of formal sources of information.

Two-Week Job-Search Activity and Success

Each of the sources of information is quite ineffective when measured by successful placements as a proportion of contacts made (see Table 17). The measure of effectiveness employed answers the question, "How many contacts did job seekers have to make on the basis

TABLE 17: TWO-WEEK JOB-SEARCH ACTIVITY AND SUCCESS

	Number of Contacts, By Source								
	SLMI*	ES	AWPK	F-R	PEA	NADV	TOTAL	OTHER & NA	Total Number Who Got Jobs, Two Weeks
	N	N	N	N	N	N	N	N	N
Experimental									
Got Job, Two Weeks	109	48	122	93	8	49	429		
No Job, Two Weeks	335	39	264	150	21	189	998		
(1) Total	444	87	386	243	29	238	1427		
(2) Got Job Through This Source	4	28	21	29	5	14	101	7	108
(2)÷(1), Effectiveness Index	.01	.32	.05	.12	.17	.06	.07		
Control									
Got Job, Two Weeks	-	44	121	44	-	77	286		
No Job, Two Weeks	-	46	338	199	14	137	734		
(1) Total	-	90	459	243	14	214	1020		
(2) Got Job Through This Source	-	22	9	21	1	16	69	18	87
(2)÷(1), Effectiveness Index	-	.24	.02	.09	.07	.07	.07		

*--SLMI--Supplemental labor Market Information List
ES--Employment Service Referral
AWPK--Application Without Prior Knowledge of Openings
F-R--Friend or Relative
PEA--Private Employment Agency
NADV--Newspaper Advertisement

TABLE 17: TWO-WEEK JOB-SEARCH ACTIVITY AND SUCCESS

	Number of Contacts, By Source								
	SLMI*	ES	AWPK	F-R	PEA	NADV	TOTAL	OTHER & NA	Total Number Who Got Jobs, Two Weeks
	N	N	N	N	N	N	N	N	N
Experimental									
Got Job, Two Weeks	109	48	122	93	8	49	429		
No Job, Two Weeks	335	39	264	150	21	189	998		
(1) Total	444	87	386	243	29	238	1427		
(2) Got Job Through This Source	4	28	21	29	5	14	101	7	108
(2)÷(1), Effectiveness Index	.01	.32	.05	.12	.17	.06	.07		
Control									
Got Job, Two Weeks	-	44	121	44	-	77	286		
No Job, Two Weeks	-	46	338	199	14	137	734		
(1) Total	-	90	459	243	14	214	1020		
(2) Got Job Through This Source	-	22	9	21	1	16	69	18	87
(2)÷(1), Effectiveness Index	-	.24	.02	.09	.07	.07	.07		

*--SLMI--Supplemental labor Market Information List
ES--Employment Service Referral
AWPK--Application Without Prior Knowledge of Openings
F-R--Friend or Relative
PEA--Private Employment Agency
NADV--Newspaper Advertisement

of a given source of information to secure one job?" The objective is to relate activity to success, rather than merely displaying the distribution of participants who made successful use of the various sources of information.

The most effective channel is specific referral by the Employment Service. The measure shown is the ratio of the number who were hired to the number who were sent out to employers in response to a job order. This means, for example, that approximately one out of every three contacts made by a participant in the experimental group on the basis of an Employment Service referral resulted in a job. However, the 177 contacts made in response to specific referrals affected only 140 registrants who were given referrals by the Employment Service; a number representing only 19 percent of the 726 participants who were interviewed, all of whom had registered with the Employment Service ostensibly to acquire job-search assistance.

The overall effectiveness of the experimental and control groups in finding jobs was comparable; one out of every fourteen contacts, or seven percent, resulted in a job. If the contacts made from the SLMI lists are omitted, as well as the four jobs that were obtained in this way, it is found that the participants in the experimental group made only ten contacts for each job secured. Why? The participants who received an SLMI list were more effective in their use of the direct application without prior knowledge technique; they made fewer contacts through this channel and secured a greater number of jobs than their counterparts in the control group did. This result could be explained by the possibility that employers, who were contacted from the SLMI lists, suggested the names of other employers who might be hiring. The questionnaire did not seek this kind of information. Thus, if a participant said "I just went to find out if they were hiring," he may in fact have had some advance inkling of what his probabilities of finding a job were. It is emphasized that this is only a plausible hypothesis to explain the observed relationships. The data collected in this project are inadequate to explore this line of inquiry any further.

Those who found jobs during the initial two-week period made more contacts, on the average, than those who did not get jobs during the same time span (see Table 18). However, if the participants who secured jobs during the first two weeks after registering with the Employment Service are withdrawn, those who did not get a job made more contacts during the subsequent six-week period, on the average, than those who did find employment. Caution is urged in interpreting these findings because of the size of the standard deviations of the means shown.

TABLE 18: MEAN NUMBER OF CONTACTS MADE (ALL SOURCES) FOR TWO-WEEK AND SUBSEQUENT SIX-WEEK INTERVALS, BY GOT JOB, AND GROUP

	Experimental		Control	
	N	Mean Number of Contacts	N	Mean Number of Contacts
Two-Week Period				
Got a Job	106	4.8 (5.7)	84	4.5 (7.3)
Did Not Get a Job	251	4.3 (4.5)	272	3.2 (4.3)
Six-Week Period†				
Got a Job	72	5.8 (7.3)	62	4.5 (5.8)
Did Not Get a Job	93	8.0 (8.6)	124	5.7 (7.9)

(Numbers in parentheses are standard deviations.)

†--includes only those who did not get a job during the initial two-week period.

The importance of this table, however, really lies in the comparison of experimental and control group behavior. Little difference is seen between the average number of contacts made by the participants in each group which found jobs during the initial two-week period. This is an expected finding because the 108 participants in the experimental group who secured jobs during the first two weeks made only a total of 109 contacts from the SLMI lists. However, the recipients of supplemental information, who did not find work during this two-week period, made an average of one more contact than the participants in the control group, 4.3 compared with 3.2. The differences are more striking during the longer subsequent six-week period.

Thus, the experimental group participants do appear to have sought work more actively than their counterparts in the control group. However, a distinction must be drawn between the expected value of information, which is based on one set of factors, and the realized value, which is based on a different set of determining factors. The implied message of the SLMI list was "seek, and ye shall find." The data collected indicate, however, that the additional search activity was largely a wheel-spinning exercise. More contacts were made using the list, but they did not result in jobs. The reader must be careful to differentiate between use and successful use, because the degree of success may be varied by changing the information inputs.

The relative success of job-search activity has also been explored on the basis of selected participant characteristics for both the experimental and control groups, and for both the two-week and subsequent six-week follow-up periods. The percentage distributions shown for the two-week activity span include all those participants for whom a first follow-up questionnaire was completed. The distributions for the six-week activity period include only those who were interviewed at the end of eight weeks and were not employed at the time of the first follow-up interview.

Table 19 compares the job-finding experience of the unemployment insurance claimants and voluntary registrants.[1] While little difference between recipients and non-recipients of SLMI lists appears during the first two weeks, voluntary registrants who received this information do appear to have been more successful during the longer subsequent six-week

TABLE 19: PROPORTION OF PARTICIPANTS WHO FOUND JOBS, BY GROUP, STATUS, AND TIME PERIOD

	Experimental			Control		
	Base N	Number Who Found a Job	%	Base N	Number Who Found a Job	%
Initial Two Weeks						
Status						
UI Claimant	155	31	(20)	212	34	(16)
Voluntary Registrant	183	75	(41)	131	51	(39)
Subsequent Six Weeks†						
Status						
UI Claimant	79	30	(38)	121	40	(33)
Voluntary Registrant	67	29	(43)	53	17	(32)

†--includes only those who were not employed at the end of the first two weeks.

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[1] Only three DPA payment recipients found a job. Therefore, this category is not included in Table 19.

period than their counterparts who did not receive the SLMI lists. The proportion of voluntary registrants who found jobs within the initial two-week period was more than twice as large as the proportion of unemployment insurance claimants who were employed.

The comparative job finding success of the participants with varying levels of educational attainment is shown in Table 20.

TABLE 20: PROPORTION OF PARTICIPANTS WHO FOUND JOBS, BY GROUP, EDUCATION, AND TIME PERIOD

	Experimental			Control		
Educational Attainment	Base N	Number Who Found a Job	%	Base N	Number Who Found a Job	%
Initial Two Weeks						
<10	93	15	(16)	97	18	(19)
10-11	112	37	(33)	89	24	(27)
12	140	49	(35)	162	37	(23)
>12	17	7	(41)	13	8	(62)
TOTAL	362	108	(30)	361	87	(24)
Subsequent Six Weeks†						
<10	48	10	(21)	54	10	(19)
10-11	49	15	(31)	46	13	(28)
12	53	31	(59)	85	34	(40)
>12	6	3	(50)	2	--	(--)
TOTAL	156	59	(38)	187	57	(30)

†--includes only those who were not employed at the end of the first two weeks.

The fact that greater proportions of those with higher levels of education have greater success in finding jobs is, of course, expected.

The interesting comparison for the purpose of this project, though, is in the differential success rates between the experimental and control groups, but all of whom have high school diplomas. A larger proportion of the high school graduates who received a SLMI list found jobs in each time period than did the graduates who participated in the control group.

IV

DURATION OF UNEMPLOYMENT

Another measure of relative success of the SLMI program is the duration of unemployment of the participants after their registration with the Employment Service. The expectation would be that with additional information the participants in the experimental group would find jobs more quickly and thereby reduce the period of idleness with its associated social and private costs.

An examination of the first row of Table 21, which refers to the initial two-week period, reveals that the recipients of supplemental information were unemployed, on the average, the same number of days after registering with the Employment Service as those persons in the control group. Those who did get jobs during this two-week period were unemployed for an average of slightly more than one week after registering with the Employment Service.

The second row in the table includes the duration of unemployment prior to Employment Service registration. The participants who received supplemental information were unemployed an average of 16 days longer prior to registering with the Employment Service than the

TABLE 21: AVERAGE DURATION OF UNEMPLOYMENT FOR TWO- AND EIGHT-WEEK PERIODS AND EACH OF THESE PLUS DURATION PRIOR TO EMPLOYMENT SERVICE REGISTRATION, BY GROUP, COLOR, AND GOT JOB.

			Experimental		Control		Experimental		Control	
	Experimental	Control	Negro	White	Negro	White	Job, 2 weeks	Job, 6 weeks	Job, 2 weeks	Job, 6 weeks
	Mean Number of days	Mean Number of days	Mean Number of days	Mean Number of days	Mean Number of days	Mean Number of days	Mean Number of days	Mean Number of days	Mean Number of days	Mean Number of days
Two-Week Maximum	12.1 (3.8)	12.3 (3.6)	12.2 (3.9)	12.1 (3.7)	12.8 (2.9)	12.2 (3.8)	7.8 (4.4)		7.4 (4.2)	
Two-Week Maximum Plus Prior	83.1 (136.0)	67.5 (77.6)	135.2 (205.0)	58.3 (74.4)	81.5 (99.6)	62.7 (68.0)	52.0 (122.4)		48.1 (56.8)	
Eight-Week Maximum	35.6 (21.6)	38.6 (21.4)	40.8 (21.3)	33.4 (21.4)	44.4 (18.5)	37.3 (21.9)		28.8 (16.5)		27.9 (15.5)
Eight-Week Maximum Plus Prior	110.2 (149.9)	94.3 (87.2)	154.4 (207.6)	91.5 (113.0)	99.2 (73.5)	93.4 (90.5)		92.7 (101.5)		74.6 (91.1)

(Numbers in parentheses are standard deviations.)

average for participants in the control group. This higher average is explained largely by the longer average length of unemployment of the Negro participants in the experimental group, who averaged more than 17 weeks of continuous unemployment prior to registering with the Employment Service, compared with an average duration of less than ten weeks for the Negroes in the control group. The white participants in each group, by comparison, had been idle for only approximately seven weeks prior to registering with the Employment Service.

The last two figures in the second row of Table 21 indicate that the average total length of unemployment for those who found jobs during the two-week period was just over seven weeks for the members of each group, with the participants who had been given SLMI and who had found jobs averaging only four days more unemployment than their counterparts in the control group. In other words, those who had been unemployed the longest prior to seeking assistance from the Employment Service did not find jobs as soon as those with shorter periods of unemployment.

The third and fourth rows of Table 21 indicate the average duration of unemployment during the full eight-week period for those people who had not found jobs during the first two weeks. The average period of unemployment after registration was three days shorter for those who had received the SLMI than for those in the control group. The Negro participants in each group were unemployed a week longer, on the average, than the comparable whites. The Negroes with supplemental information, though, were idle four days less, on the average, than the Negroes without supplemental information.

Again, there is little difference in the length of time it took the members of each group to secure a job during the six-week period. The average duration of unemployment after Employment Service registration for those who obtained jobs during the third through the eighth week was approximately 28 days. In this case, more of those in the experimental group who found jobs are the ones who had been out of work for extended periods, since the average total length of unemployment for those who secured jobs during the third through eighth week after Employment Service registration is 13 weeks for the members of the experimental group compared with ten weeks for the participants in the control group. Again, caution is urged in interpreting these data because of the magnitude of the standard deviations of the means.

V

SUMMARY

Of the 364 recipients of SLMI lists who were interviewed after a two-week period, 43 percent had made one or more contacts with listed employers.

A total of 444 contacts with listed employers were made by these participants during the initial two weeks after registering with the Employment Service. This number of contacts made by experimental group participants represents almost a net addition to the number of contacts made by the participants who did not receive supplemental information.

Transportation difficulties were cited by nonusers as the single most important reason why contact was not made with listed employers.

Among the participants who had not found jobs by the end of the eight-week period, those who had been given supplemental information made significantly more contacts in an attempt to find work than those in the control group.

Fifty-nine percent of the participants in the experimental group had found jobs within the eight-week follow-up period, compared with 48 percent of those in the control group.

One-third of the participants with supplemental information found jobs within the initial two-week period, compared with one-fourth of the control group registrants.

One-half of the Negroes who had received supplemental information found jobs, but less than one-third of the Negroes in the control group was successful in locating employment.

Only six of the participants who had been given supplemental information attributed their success in finding a job directly to the list of employers.

The average duration of unemployment, including unemployment prior to Employment Service registration, for those who did find jobs during the eight-week period is slightly more than seven weeks for the members of both the experimental and control groups.

The Negro participants who received SLMI lists reduced the average duration of unemployment by four days compared to the Negroes in the control group, but the Negroes in each group were out of work for an average of one week more after registering with the Employment Service than the white participants.

CHAPTER 7

JOB-SEARCH BEHAVIOR AND SUCCESS: A MULTIPLE REGRESSION ANALYSIS[1]

INTRODUCTION

The data in Chapter 6 suggest that the recipients of supplemental labor market information were in general unsuccessful in finding jobs through this channel, even though nearly half of them had made one or more personal contacts with listed employers. Does this mean the SLMI procedures should not be considered in future Employment Service operations?

It has already been noted that simple two-way relations provide a tenuous basis for making sound judgements concerning the net effect of supplemental information on search behavior and success. On the one hand, these two-way arrays may obscure significant relationships among factors; or, on the other hand, they may suggest relationships between factors which do not in fact exist. Therefore, if the objective is to measure the net effect of supplemental labor market information on the success of the search for work, a more refined analytical technique must be introduced.

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[1] The reader who is interested in a detailed explanation of multiple regression techniques is referred to Mordecai Ezekiel and Karl Fox, Methods of Correlation and Regression Analysis, John Wiley and Sons, Inc., 1959, Chapters 11 and 12. A brief explanation of the regression technique using qualitative variables is appended to the present chapter.

The purpose of the present chapter is to test two basic hypotheses: first, that the job-search activity of the recipients of supplemental labor market information will have been more successful, where success is measured by, 1) getting a job and, 2) reducing the duration of unemployment; and second, that among those who do not find jobs, recipients of supplemental information will have more actively sought work, as measured by the number of contacts made with employers in the search effort. These hypotheses are tested through the use of multiple regression analysis, a technique which allows the measurement of the net effect of one independent, or explanatory, variable on the value of a selected dependent variable while controlling for the effects of other specified factors.

Section I presents and interprets the regression analysis in which variation in job-finding success is to be explained. This is followed in Section II by a similar analysis of the duration of unemployment. Section III is devoted to an analysis of job-search activity, in which the factor to be estimated is the variation in the number of firms contacted.

In Sections I and II separate analyses are made for the Negro and white participants as well as for the two combined. The effect of estimating separately the net effects for each of the color groups is the same as including an interaction term for color and each other explanatory factor. Either procedure provides an independent estimate of the net effect of each factor, as well as a measure of the combined effect of each explanatory factor and color on the variation to be explained. Since the value of providing supplemental information is expected to accrue primarily to the disadvantaged job seeker, it is appropriate to differentiate between the relative importance of the supplemental information to Negroes and whites.

I

JOB-FINDING SUCCESS

Job-Finding Success After Two Weeks

Variation in job-finding success is studied first. Table 22 presents the estimated net effects of the explanatory factors (partial regression coefficients) separately for the Negro and white participants, and for the total sample, where success in finding a job during the initial two-week period has been regressed on seven qualitative variable sets and one continuous variable.

No statistically significant net effect of supplemental labor market information is found on job-finding success within the initial two-week period for either the Negro or white participants.

Graduation from high school affects negatively the probability of a Negro having found a job, relative to the experience of the Negro

TABLE 22: DETERMINANTS OF JOB-SEARCH SUCCESS IN THE TWO-WEEK PERIOD FOLLOWING REGISTRATION WITH THE PENNSYLVANIA STATE EMPLOYMENT SERVICE

Variable	Negro b (s)	White b (s)	All b (s)
Group			
Control	I	I	I
Experimental	.023	.029	.032
	(.062)	(.044)	(.035)
Education			
Non-High School Graduate	I	I	I
High School Graduate	-.131*	.070	.004
	(.065)	(.045)	(.037)
Status			
Voluntary Rigistrant	I	I	I
DPA	-.129	-.373**	-.273**
	(.131)	(.114)	(.087)
UI	-.135*	-.284**	-.227**
	(.067)	(.047)	(.038)
No. of Dependents			
Fewer than 3	I	I	I
3 or More	.075	.025	.037
	(.064)	(.046)	(.038)
Color			
Negro	---	---	I
White	---	---	.080*
			(.039)
Date of ES Registration			
Prior to Labor Day	I	I	I
After Labor Day	-.001	-.106*	-.064
	(.062)	(.043)	(.035)
Duration of Unemployment Prior to Registration	-.00096**	-.00039	-.00072**
	(.00031)	(.00033)	(.00023)
Age			
18-29	I	I	I
30-50	-.160	-.101	-.122*
	(.128)	(.064)	(.057)
51-65	-.049	-.099*	-.078
	(.067)	(.050)	(.040)
Intercept	.390	.534	.430
	(.088)	(.064)	(.058)
F-Statistics:			
Status	2.17	20.39**	19.28**
Age	.85	2.39	3.08*
All Variables	2.24*	8.28**	8.08**
$\bar{R}^2$	.06	.15	.11
N	167	377	544

b--is the partial regression coefficient.
(s)--is the standard error of b.
*--significant at the .05 level.
**--significant at the .01 level.
I--indicates the element of a dummy set that was entered into the intercept.
$\bar{R}^2$--is the coefficient of determination, adjusted for degrees of freedom.

dropouts. This may be due to the higher level of aspiration of the Negro high school graduate who is confronted with barriers to satisfactory employment opportunities. He therefore holds out for an acceptable position which is likely to take longer to find. Additional evidence on this point is shown in the eight-week regression results.

After controlling for the effect of the other factors in the specified relation, unemployment insurance claimants and welfare payment recipients are substantially less likely than voluntary registrants to have found jobs within two weeks after registering with the Employment Service.

The net effect of color on job-finding success is seen to be of positive advantage to the white participants.

The participants who were interviewed in the Employment Service office after Labor Day were less likely to have found a job than those who registered before this date. Since the general level of economic activity in the labor market area was higher during the later period it is not clear why this relation is found. The coefficient of the seasonal variable is negative for both whites and Negroes, and statistically significant for the white participants.

As expected, age is negatively related to the probability of success in finding work during the two-week period.

Most of the variation in job-finding success is not explained by the factors included in the specified relation. This can be attributed, in part at least, to the short duration of time which had elapsed since Employment Service registration. Therefore, Table 23 presents the estimated net effects of the same factors on job-finding success for the eight-week period.

TABLE 23: DETERMINANTS OF JOB-SEARCH SUCCESS IN THE EIGHT-WEEK PERIOD FOLLOWING REGISTRATION WITH THE PENNSYLVANIA STATE EMPLOYMENT SERVICE

Variable	Negro b (s)	White b (s)	All b (s)
Group			
Control	I	I	I
Experimental	.214*	.040	.078
	(.101)	(.061)	(.051)
Education			
Non-High School Graduate	I	I	I
High School Graduate	.160	.168**	.174**
	(.103)	(.063)	(.052)
Status			
Voluntary Registrant	I	I	I
DPA	-.579**	-.534**	-.526**
	(.219)	(.171)	(.133)
UI	-.204	-.165**	-.159**
	(.105)	(.065)	(.054)
No. of Dependents			
Fewer than 3	I	I	I
3 or More	.236*	.115	.153**
	(.101)	(.066)	(.054)
Color			
Negro	---	---	---
White	---	---	.107
			(.058)
Date of ES Registration			
Prior to Labor Day	I	I	I
After Labor Day	-.126	-.127*	-.119*
	(.098)	(.060)	(.050)
Duration of Unemployment Prior to Registration	-.0010*	-.0003	-.0006*
	(.0005)	(.0004)	(.0003)
Age			
18-29	I	I	I
30-50	.134	-.198**	-.152*
	(.203)	(.085)	(.076)
51-65	-.058	-.126	-.114*
	(.104)	(.071)	(.058)
Intercept	.426	.682	.535
	(.141)	(.090)	(.086)
F-Statistics:			
Status	4.48**	6.66**	10.19**
Age	.52	3.18*	2.91*
All Variables	3.19**	5.72**	7.67**
$\bar{R}^2$	.13	.15	.17
N	93	252	345

b--is the partial regression coefficient.
(s)--is the standard error of b.
*--significant at the .05 level.
**--significant at the .01 level.
I--indicates the element of a dummy set that was entered into the intercept.
$\bar{R}^2$--is the coefficient of determination, adjusted for degrees of freedom.

Job-Finding Success After Eight Weeks

The net effect of SLMI on the job-finding success of Negroes after eight weeks is positive and statistically significant. The size of the net effect is also substantially larger than the value estimated for the white participants. This can be interpreted to mean that the net effect of receiving supplemental information was greater for Negroes than it was for whites, controlling for the effects of other factors included in the relation.

The acquisition of a high school diploma increases the probability of finding a job for both Negroes and whites over this time period, as opposed to the inverse relationship observed for Negroes during the initial two-week interval. As indicated before, this behavior pattern may be due to the aspiration-opportunity nexus confronting the Negro high school graduate.

A participant's status as an unemployed insurance claimant or a welfare recipient reduced his probability of finding a job after allowing for the effect of the supplemental information.

The positive effect of the number of dependents on job-finding success is expected, since the variable is an index of economic pressure. This statement is reinforced by the observed relative size of the net effect for the Negro and white participants. The positive net effect is larger for the Negroes and they might be expected to have fewer alternative sources of support, such as personal savings or borrowing from friends or relatives.

The white participants are obvious beneficiaries of the net effect of color on job-finding success. The negative seasonal factor is still present over the eight-week period. The longer a participant had been unemployed the less likely he is to have found a job within two months following Employment Service registration. This cumulative relationship needs additional intensive study by students of the labor market. Age also continues to be negatively associated with job-finding success.

The proportion of total variation in job-finding success explained by the specified explanatory factors is substantially higher over this eight-week period for the Negro participants than it was for the shorter two-week span. This means that the same factors explain a different proportion of the variation in job-finding success of Negroes depending upon the time period chosen. This was not found in the estimation of the relation for the white participants. A possible explanation for this lies in the size of the net effect of having received supplemental information for the Negro participants, relative to the net effect for the white participants, since the size of the effects of the other factors does not vary much between the two time periods.

II

DURATION OF UNEMPLOYMENT

Introduction

The phenomenon to be explained in this section is variation in the number of days of unemployment following Employment Service registration. Three additional explanatory factors are introduced in this relation.

Duration of Unemployment After Two Weeks

No statistically significant net effect of supplemental information on the length of unemployment is found for either Negroes or whites within two weeks after they register with the Employment Service. (See Table 24.)

Both recipients of unemployment insurance benefits and welfare payments are found to have been unemployed nearly two days longer (out of 14 maximum) than the voluntary registrants, after controlling for the effect of the other factors in the relation.

As expected after finding a negative relationship between education and job-finding success of Negroes over the two-week period, the net effect of high school graduation on duration of Negro unemployment is positive, i.e., Negro high school graduates were unemployed more than a day longer than Negro non-graduates, after controlling for the other factors in the relation.

An index of initiative in job-seeking activity was included in this relation in an attempt to secure some measure of the net effect of a wide-ranging approach to search. The measure selected indicates whether or not an applicant applied directly to at least one firm during the two-week period with no prior knowledge of openings. The estimated coefficient values indicate that such wide-ranging search has no significant net effect on the duration of unemployment over this short time span.

The presence of other earners variable is included in this relation as another proxy for the economic pressure on the participant to find work. The presence of another earner in the household would be expected to affect _when_ the participant gets a job, but not _whether_

TABLE 24: DETERMINANTS OF DURATION OF UNEMPLOYMENT IN THE TWO-WEEK PERIOD FOLLOWING REGISTRATION WITH THE PENNSYLVANIA STATE EMPLOYMENT SERVICE

Variable	Negro	White	All
	b	b	b
	(s)	(s)	(s)
Group			
Control	I	I	I
Experimental	-.37	.43	.13
	(.51)	(.38)	(.30)
Education			
Non-High School Graduate	I	I	I
High School Graduate	1.21*	-.32	.13
	(.57)	(.38)	(.31)
Status			
Voluntary Registrant	I	I	I
DPA	.92	2.90**	1.93**
	(1.10)	(.98)	(.74)
UI	1.22*	2.11**	1.71**
	(.55)	(.40)	(.33)
No. of Dependents			
Fewer than 3	I	I	I
3 or More	-.39	-.25	-.26
	(.66)	(.49)	(.40)
Color			
Negro	--	--	--
White	--	--	-.44
			(.34)
Date of Employment Service Registration			
Prior to Labor Day	I	I	I
After Labor Day	.12	.99**	.53
	(.52)	(.37)	(.30)
Initiative			
Did Not Apply Without Prior Knowledge of Openings	I	I	I
Applied Without Prior Knowledge of Openings	-.14	.64	.50
	(.56)	(.41)	(.33)
Duration of Unemployment Prior to Registration	.0072**	.0017	.0045*
	(.0025)	(.0028)	(.0019)

TABLE 24: (continued)

Variable	Negro	White	All
	b	b	b
	(s)	(s)	(s)
Marital Status			
Married	I	I	I
Single	-.36	.87	.36
	(.78)	(.56)	(.45)
Other	1.34	-.46	.35
	(.72)	(.64)	(.48)
Other Earners in Household			
No	I	I	I
Yes	.39	-.04	.24
	(.59)	(.40)	(.33)
Age			
18-29	I	I	I
30-50	1.08	.75	.73
	(1.09)	(.59)	(.51)
51-65	-.22	.63	.30
	(.57)	(.44)	(.35)
Intercept	11.09	9.54	10.43
	(.91)	(.68)	(.61)
F-Statistics:			
Status	2.51	15.47**	14.84**
Age	2.51	2.04	.44
Marital Status	.77	1.31	1.08
All Variables	1.76	4.06**	3.80**
$\bar{R}^2$	.05	.10	.07
N	167	377	544

b--is the partial regression coefficient.
(s)--is the standard error of b.
*--significant at the .05 level.
**--significant at the .01 level.
I--indicates the element of a dummy set that was entered into the intercept.
$\bar{R}^2$--is the coefficient of determination, adjusted for degrees of freedom.

he gets a job. This is why this factor is not included in the relation which was specified to explain variations in job-finding success. Even in the present relation, however, the estimated net effect is neither statistically significant nor of sizable magnitude.

Duration of Unemployment After Eight Weeks

No statistically significant net effect of supplemental information is found on the length of unemployment after eight weeks for either Negro or white recipients. (See Table 25.)

The effect of education on the duration of Negro unemployment is still not statistically significant, while a strong net reduction in the period of unemployment is found for white high school graduates relative to their counterparts who did not finish high school.

Both the DPA and UI recipients were unemployed longer than the voluntary registrants, after controlling for the effects of the other factors in the equation.

The white participants were unemployed nearly a week less than the Negro registrants, after controlling for the non-color factors.

None of the three indices of economic pressure were found to have a significant effect on the duration of unemployment over the eight-week period.

TABLE 25: DETERMINANTS OF DURATION OF UNEMPLOYMENT IN THE EIGHT-WEEK PERIOD FOLLOWING REGISTRATION WITH THE PENNSYLVANIA STATE EMPLOYMENT SERVICE

Variable	Negro	White	All
	b (s)	b (s)	b (s)
Group			
Control	I	I	I
Experimental	-4.03	.13	-.83
	(4.24)	(2.61)	(2.18)
Education			
Non-High School Graduate	I	I	I
High School Graduate	5.60	-7.23**	-3.81
	(4.34)	(2.68)	(2.26)
Status			
Voluntary Registrant	I	I	I
DPA	22.09*	20.89**	18.46**
	(9.33)	(7.36)	(5.66)
UI	5.19	9.77**	7.40**
	(4.53)	(2.75)	(2.31)
No. of Dependents			
Fewer than 3	I	I	I
3 or More	-9.55	-2.33	-4.00
	(5.43)	(3.60)	(2.96)
Color			
Negro	---	---	I
White	---	---	-5.96*
			(2.47)
Date of ES Registration			
Prior to Labor Day	I	I	I
After Labor Day	9.72*	8.98**	7.72**
	(4.32)	(2.55)	(2.13)
Initiative			
Did Not Apply Without Prior Knowledge of Openings	I	I	I
Applied Without Prior Knowledge of Openings	3.30	2.70	3.43
	(4.59)	(2.83)	(2.39)
Duration of Unemployment Prior to Registration	.049*	-.0003	.019
	(.021)	(.0183)	(.014)

TABLE 25: (continued)

Variable	Negro	White	All
	b	b	b
	(s)	(s)	(s)
Marital Status			
Married	I	I	I
Single	-.37	4.62	2.03
	(6.18)	(3.90)	(3.27)
Other	10.85	4.50	6.83
	(5.91)	(4.67)	(3.56)
Other Earners in Household			
No	I	I	I
Yes	4.03	.91	1.59
	(4.53)	(2.77)	(2.32)
Age			
18-29	I	I	I
30-50	.59	6.88	5.58
	(8.44)	(3.96)	(3.48)
51-65	3.07	6.15*	5.05*
	(4.42)	(3.10)	(2.50)
Intercept	32.13	23.81	31.15
	(7.49)	(4.71)	(4.48)
F-Statistics:			
Status	2.94*	8.60**	8.64**
Age	2.62	.87	2.47*
Marital Status	.25	2.49	1.84
All Variables	1.53	4.49**	4.84**
$\bar{R}^2$	.07	.16	.13
N	93	252	345

b--is the partial regression coefficient.
(s)--is the standard error of b.
*--significant at the .05 level.
**--significant at the .01 level.
I--indicates the element of a dummy set that was entered into the intercept.
$\bar{R}^2$--is the coefficient of determination, adjusted for degrees of freedom.

III

JOB-SEARCH ACTIVITY LEVEL

Introduction

The phenomenon to be explained in this section is the variation in the total number of personal contacts made with employers.

The relevant population group includes only those who did not find a job during the entire eight-week period following Employment Service registration. Does the receipt of supplemental information increase the job-search activity level of the participants? Since activity is measured by number of firms contacted, it would not be conceptually correct to include in the sample those participants who had found jobs, because this would introduce both a time unit and quality of information bias. It only takes one contact to get a job, and having found a job the search ends. What is sought is an understanding of the determinants of search activity over a given time period. Each participant included in this analysis was unemployed, and ostensibly actively seeking work, for at least eight weeks following registration with the Employment Service. What factors explain the variation in the number of contacts made in an attempt to find work? Did the giving of supplemental information have a positive effect on this measure of job-search activity? Table 26 displays the results of the analysis.

TABLE 26: DETERMINANTS OF NUMBER OF FIRMS CONTACTED BY THOSE WHO DID NOT FIND A JOB DURING THE EIGHT—WEEK PERIOD FOLLOWING REGISTRATION WITH THE PENNSYLVANIA STATE EMPLOYMENT SERVICE

Variable	b (s)
Group	
Control	I
Experimental	2.58
	(1.34)
Education	
Non-High School Graduate	I
High School Graduate	1.64
	(1.50)
Status	
Voluntary Registrant	I
DPA	.37
	(2.57)
UI	1.63
	(1.59)
No. of Dependents	
Fewer than 3	I
3 or More	.20
	(1.85)
Color	
Negro	I
White	.12
	(1.44)
Expect Recall	
No	I
Yes	-.29
	(1.44)
Application Without Prior Knowledge Before ES Registration	
No	I
Yes	-.49
	(1.38)
Application Without Prior Knowledge After ES Registration	
No	I
Yes	5.02**
	(1.46)
Date of ES Registration	
Prior to Labor Day	
After Labor Day	-1.28
	(1.33)
Length of Time Unemployed Before ES Registration	.0035
	(.0071)
Marital Status	
Married	I
Single	-3.79*
	(1.93)
Other	2.20
	(2.08)
Other Earners	
No	I
Yes	.66
	(1.52)
Age	
18-29	I
30-50	-4.89*
	(2.05)
51-65	-2.87
	(1.56)

Intercept	6.58
	(2.86)
F-Statistics:	
Status	.54
Age	3.28*
Marital Status	3.91**
All Variables	2.22**
$\bar{R}^2$	.10
N	169

b--is the partial regression coefficient.
(s)--is the standard error of b.
*--significant at the .05 level.
**--significant at the .01 level.
I--indicates the element of a dummy set that was entered into the intercept.
$\bar{R}^2$--is the coefficient of determination, adjusted for degrees of freedom.

Number of Contacts by Those Still Unemployed After Eight Weeks

It is seen that participation in the experimental group had no statistically significant net effect on search activity.

Among those who did not find jobs within eight weeks after registering with the Employment Service, the unemployment insurance claimants and welfare payment recipients were no more, or less, active in their search for work than were the voluntary registrants, controlling for the effect of other factors in the relation.

As would be expected, those who applied directly to firms without prior knowledge of openings made significantly more total contacts than those who did not use this search technique. It was shown in Sections I and II, however, that use of this technique is not reflected in greater success, as measured by the duration of unemployment and whether the job seeker found employment.

Those in the 30-50 age cohort made fewer contacts than their younger counterparts, after controlling for the effect of other factors. The size of the negative effect relative to the under 30 group is larger for the age 30-50 group (who might be expected to have greater family responsibilities and more to offer an employer) than for the job seekers who are 51 or older.

Number of Contacts Made by Those Who Did Find Jobs

Parameters were also estimated for the same relation as has been described above, but this time for those who did find jobs during the eight-week period. The estimated values of the net effects are not presented in tabular form here because only one factor, duration of unemployment prior to registration with the Employment Service has a statistically significant (positive) effect on the number of contacts made. The theoretical model presented in Chapter 2, of course, indicates that additional information should increase the effectiveness of search and thereby reduce the number of contacts necessary to find a job. In this sense, the experimental-control dummy variable becomes a measure of informational quality. If the supplemental information given was of a high quality then the number of contacts necessary to find a job should be less for those who received this information than for those control group participants who were not assisted in this way. The finding that the estimated net effect is extremely small and that it does not approach statistical significance indicates that the SLMI list did not significantly increase the effectiveness of search for the participants who received it. The reader should be clear on the distinction between effectiveness (number of contacts necessary to find a job) and success (the finding of a job), as the terms are used here.

The Two Basic Hypotheses--Again

Was the job-search activity of the recipients of supplemental labor market information more successful than that of their counterparts in the control group, as measured by whether a job was secured within eight weeks after Employment Service registration? It can be said with confidence that the Negro recipients of supplemental information were more successful than their counterparts in the control group. The net effect on the success of the white participants is more doubtful.

When the success measure is duration of unemploymnet after registering with the Employment Service, participation in the experimental group appears to have had no significant effect on the length of time the participants remained out of work.

Finally, the quantitative and qualitative measures of search indicate that the recipients of supplemental information may have engaged in a more active search for work, but the net effect of the supplemental information on the effectiveness of search was not significant, where effectiveness is measured by the number of contacts made by those who found jobs.

APPENDIX

Multiple Regression Analysis

Multiple regression analysis is a statistical technique which is used to measure the individual effects of selected independent variables on a given dependent variable. The terms 'independent' and 'dependent' are used only to indicate that in the postulated relation the dependent variable is a function of the independent variables. This functional relationship does not hold exactly. The objective is to estimate coefficients for the independent variables, such that the relation will yield a least-squares estimate of the dependent variable. By looking at the magnitude and statistical significance of these coefficients, insights can be gained into which variables are significantly related to the dependent variable. A major advantage of this technique is that the net effect of each independent variable is measured after allowing for the effects of all the other independent variables in the specified equation.

In a simple two-way cross-tabulation the true relationship between two variables cannot be observed, for in omitting other significantly related variables the nature of the true relationship is obscured. As a result, little confidence can be placed in the acceptance or rejection of the hypothesis that there is a relationship between the two variables, for a perceived relationship may not really exist or one that does exist may not be perceived.

Continuous and Qualitative Regressors

When variables can be thought of as continuous, i.e., when they take on numerical values whose size is meaningful, no difficulty arises in conceptualizing a relationship among them. The partial regression coefficients are interpreted as the change in the dependent variable associated with a one-unit change in the relevant independent variable. However, in the SLMI study most of the variables are not of this type. Such variables as color and marital status are qualitative variables. It will be instructive to look at the technique by which these qualitative variables are incorporated into a postulated relation.

Consider a color variable which can only take on two 'values': white and nonwhite. A value of '1' is assigned to this variable for white and '0' for nonwhite. The partial regression coefficient is then interpreted as follows: Assume the dependent variable is hourly earnings in dollars and that the partial regression coefficient is .25.

This means that after allowing for the effects of other variables in the specified relation, whites earned twenty-five cents more per hour than nonwhites.

This technique can be extended to any number of categories, e.g., white, Negro, Mexican-American and Indian. Here, a '1' is assigned separately to each element (except one). The result is that the coefficients are measured relative to the excluded category.

Qualitative Dependent Variables

One of the variables to be explained in the SLMI study is job-finding success. If a value of '1' is assigned to job-finding success and '0' to failure, the dependent variable can take on only these two values as observed. However, the estimated relation will yield a calculated value for the dependent variable which will be somewhere between '0' and '1'. For interpretative purposes, this value can be thought of as the probability of finding a job. With this in mind, the meaning of the partial regression coefficients can be reinterpreted. For continuous variables the coefficient is the change in probability of job-finding success associated with a one-unit change in the independent variable. For qualitative variables it is the difference between the element under consideration and the excluded element.

CHAPTER 8

FINDINGS AND CONCLUSIONS

INTRODUCTION

Was meaningful information given to participating job seekers? What was the net effect on job-search behavior and success of providing the supplemental information? This chapter provides summary answers to these questions.

Job-Search Activity

Nearly half the recipients of supplemental information who were interviewed two and eight weeks after registering with the Employment Service had personally contacted one or more of the listed employers in an attempt to find work. Most of those who used the SLMI list did so during the initial two-week period, although one out of eight had waited at least two weeks before contacting a listed employer.

The level of search activity of the participants who had received supplemental information is 40 percent higher than the number of contacts made by the control group participants, but no statistically significant net effect of supplemental information on job-search activity is found when the time factor is controlled by comparing the behavior of only those participants who did not find jobs during the eight-week period. The interview environment in the Employment Service office was carefully controlled at the time the participants in the experimental group were given the supplemental information. It was held that the more unstructured the interview became the less sensitive the evaluation technique would be to the net effect of supplemental information on job-search activity and success. The degree of control should not be overstated because the Employment Service interviewers were advised to continue to incorporate the normal extent of individuality into the interviewing process. However, the interviewers who conducted the operational experiment have expressed the opinion that the response of the registrants to the SLMI list could probably be favorably changed under less highly structured circumstances.

Nevertheless, the reported reasons for not using the SLMI list as a reference to possible employment opportunities reflect the difficulties encountered by many job seekers. For instance, one out of every five participants who did not use the SLMI list attributed his inactivity to a lack of access to adequate transportation. A few who had cars said they could not afford the gasoline to engage in a wide-ranging search. It should be noted again, however, that in the multiple regression analysis the presence of a car and drivers license was not found to have a significant effect on job-search success.

Job-Finding Success

The Negro recipients of supplemental information were significantly more successful in finding jobs during the eight-week period than were Negro participants in the control group, after controlling for the effects of other related factors. The same estimated relationship among the white participants is neither as large nor statistically significant.

This finding is of great interest, even though caution is urged in its interpretation because only six participants attributed their success in finding a job to use of the SLMI list, and not one of the six is a Negro. The questionnaire design did not anticipate this finding and no detailed information was sought on how jobs were found beyond the basic question, "What was the source of information which led you to the employer. For example, where did you FIRST hear about the first job opening?" It is now apparent that it would have been useful to pursue this line of inquiry by asking such questions as whether an employer who was contacted from the SLMI list might have suggested another employer whom he thought was hiring.

What has been found is that Negro job seekers who were given supplemental information were more successful in finding jobs than Negroes who had not received SLMI lists, *after controlling for the effect of other factors*, but that they did not attribute this greater degree of success to use of the SLMI list. The estimated statistical relationship is based solely on whether a given participant secured a job, while the recorded source of information through which it was secured depends on the participant's recall and attitude toward the interview situation. Alternatively, since the general level of search activity was higher among those who had been given supplemental information, it may be that the list acted as an indirect impetus to increase the number of contacts made with employers, which in turn led to a greater degree of success in finding jobs.

The fact that the net effect of supplemental information for the white recipients reaches neither the magnitude nor the level of statistical significance that was found for Negroes may be explained by the greater access and exposure whites have to other sources of labor market information. In other words, the supplemental information may represent a smaller proportion of the total information available to the white participants than is true for the Negro participants. Therefore, the expected value of the SLMI list would be lower for white recipients, and they would be less likely to use it. While the analysis conducted in the evaluation of this project lends support to these explanations, the issue is far from being clearly defined.

Duration of Unemployment

The receipt of supplemental information did not significantly affect the length of time that the participants were unemployed after registering with the Employment Service. However, it was found that among those who did find jobs the average total duration of continuous unemployment, including the time prior to Employment Service registration, is substantially longer for those who received supplemental information than for those who did not. While this finding is derived from a single cross-tabulation of duration of unemployment against experimental-control group status, and therefore does not control for the effect of other factors, it suggests that supplemental information may be of value to those who have exausted, or never had, alternative sources of information.

Efficiency, Effectiveness, and Success

Chapter 1 indicates that two fundamental issues are involved in the SLMI experiment. One involves the question of whether the expected value of the information would be such that recipients would contact listed employers. The second issue revolves around the realized value of the search activity, which is dependent upon success in the search effort as measured by whether a job is found and whether the duration of unemployment is reduced.

These two aspects of the test interact. For instance, the more effective the search is (measured by duration of unemployment and job-finding success) the less likely the participant is to have been active (measured by number of contacts made).

It should be clear, then, that the objective is not increased activity; it is increased effectiveness of search. However, care should be taken not to throw the baby out with the bath water. If the level of search activity, which is only a means to achieve a desired objective, can be affected, then attention can be turned to increasing the effectiveness of the search.

The Cost of Providing Information

Finally, brief mention must be made of costs. Every program, no matter how beneficial it may appear on the surface, must be evaluated with regard to both costs and benefits. As Chapter 3 points out, even if it was found that every recipient of an SLMI list found a job while not one of the participants in the control group had secured employment, there would be no basis for giving the program carte blanche approval. Who got the jobs? Who would have gotten them in the absence of the SLMI program? What alternative uses could be made of the resources invested in the program?

There are income redistribution aspects here which have not been explored at all. On the one hand, the SLMI program would be desirable (assuming, for the moment, that the direct cost of adding such a program to ongoing Employment Service procedures would be zero) if it could be shown that the recipients of information who had found jobs would not have done so otherwise, and further that the vacancies they filled would not have been taken by other job seekers. On the other hand, even with the same zero added cost assumption, the program might not be desirable if it puts people into job slots which would otherwise have been filled by job seekers who are held to be more deserving by some criteria set, or if the successful job seekers themselves would have found the jobs on their own without the supplemental information. Since the direct cost of any program is never zero, an empirical evaluation of the net private and social benefits to be derived from the provision of labor market information would be exceedingly complex. And any net benefit estimated would have to be compared with the potential return attainable through alternative uses of the resources to be invested.

The inadequacies of information for decision making present a bleak note on which to end, but the process of acquiring information on which to base decisions is itself costly, and it is not clear that by incurring these increased costs the allocation of resources would be bettered enough to yield a net return.

Summary

The role of information in job-search behavior has interested students of the labor market for a long time. However, the author is not aware of a single previous study that used the methodology which was adequate to assess the net effect of information on job-search behavior and success. The experimental program was specifically designed to measure this net effect. The findings of this study do raise questions concerning the allocation of future investments in job-search assistance. While these findings are indicative rather than definitive, they nevertheless add important new information to our knowledge of how contemporary local labor markets function. At the same time they suggest additional questions for research on job-search behavior.

CHAPTER 9

PROGRAM AND RESEARCH RECOMMENDATIONS

INTRODUCTION

Based on the preceding evaluation, this final chapter sets forth recommendations of an exploratory nature. Each suggestion made here stems directly from the experience gained in the design, conduct, and evaluation of the experimental supplemental labor market information program. An effective critique of this program will allow others to avoid the pitfalls encountered while realizing the benefits of the prior experience.

I

LABOR MARKET INFORMATION

The effectiveness of individual job-search activity was not significantly affected by the provision of supplemental labor market information in the form used in this program. It is apparent that more refined techniques of information development and dissemination are required. The present experimental program was designed to serve all males who registered with a local Employment Service office, who were actively seeking a job, and who had prior work experience. This was done because the objective was to test the efficacy of the program as a general operational procedure. However, labor market information is of no value to an applicant who is not actively seeking work, although an observed absence of search activity may be due to a lack of information. Nor is labor market information of value to a person who does not have the basic prerequisites to participate in the marketplace. Finally, some active job seekers place little value on supplemental information because of access to job opportunities through other channels.

1. One basic requirement before an effective labor market information program can be implemented is to perfect the identification procedure of individual applicant needs. The Employment Service, of course, already screens each applicant and provides the appropriate services that are currently available. However, continuing experimentation is needed to explore ways of identifying those applicants who might be expected to actively search on their own if they only knew where to apply. Therefore, it is recommended that:

> experimentation be continued at the local Employment Service office level to establish reliable indices of applicant informational requirements. A variety of related operational-research programs are already underway, and other have been completed and their findings widely disseminated.

2. The determination of a statistically significant net relationship between Negro participation in the experimental group and job-finding success (see Table 23 on page 134) may be of great operational value, but the reason for the observed relation is not clear. No Negro recipient of supplemental information attributed his success in finding a job to the supplemental information received. Nevertheless, after controlling for the effects of other factors in the specified relation, such as age, education, marital status, length of time unemployed, and application status, a net positive effect of the receipt of supplemental information on the job-finding success of the Negro participants remains. While the statistical methods employed allow substantial confidence to be placed in the estimated relation, it is possible that this relation is due either to chance or to interaction effects with factors which are not included in the specified relation. Therefore, it is recommended that:

> an experimental information program be undertaken in a local Employment Service office which serves a largely minority population. This might be attempted in either a Negro or Spanish-American neighborhood, or perhaps in both. Such a program should incorporate in its design a technique to acquire information about sources of labor market information known to the participants.

Blue-collar minority group participants in the labor market have been found in previous studies to operate largely outside the established institutional information channels. This, coupled with discriminatory hiring practices, makes the finding reported in Chapter 7 especially interesting. The recommendation made above is set forth with full recognition of the inconclusive nature of the association determinal receipt of supplemental informational and job-search success. It must also be recognized however, that, in the present climate of easing discriminatory practices and substantial numbers of unfilled job-openings, a Negro job seeker may be in a relatively favorable position, if he knows where to look for a job.

3. It has been found that supplemental information in the form given did not increase the effectiveness of the search process. It is therefore recommended that:

> the design of any sequel supplemental labor market information program should incorporate the active participation of local employers in the development of a comprehensive roster of employer-specific job areas for which direct application might be expected to result in a job. This effort could be combined with an experimental attempt to use voluntary job vacancy reporting for referral purposes.

Concern was expressed in the early stages of the determination of operational procedures to be used in the present project that employers would react negatively to the 'referral' of job applicants to the place of employment when the employer had not filed a specific job order with the Employment Service. However, no such reaction was observed, even though a number of participants did lend credence to their application by saying the Employment Service had sent them.

Also, based on the types of jobs secured by the participants (see Appendix B), some doubt is cast on the value of tabulating a list of potential opportunities on the basis of a full six-digit D.O.T. code. It would appear to be more fruitful to seek information directly from the employers in the local labor market area about what types of jobs they do (or would) consider gate applicants to be eligible for. In this way, additional information could be secured about when applicants are received and who they should see. This approach would run the risk of employer indifference to the need for such a program because of a concern that they would be inundated with job seekers. If this is so, and it should be empirically validated, it could be inferred that employers do not think there is a need for additional gate applicants. This raises the question of how resources should be allocated in the Employment Service between job development and passive referral activities. To what extent should Employment Service offices respond only to voluntary employer and applicant requests for service, and to what extent should they actively engage in recruitment and job development activities? An answer to this question would, of course, define the role of the Employment Service in the overall labor market mechanism, and extends far beyond the scope of the present program. However, the job-search activity and success of the unemployment insurance claimants and welfare payment recipients who participated in the present study suggests the potential value of several additional exploratory programs.

II

REGISTRATION REQUIREMENTS AND APPLICANT SERVICES

1. Substantial resources are allocated in the Employment Service to the policing function of varifying the active search for work of unemployment insurance beneficiaries.

It was found in Chapter 7 that unemployment insurance recipients were less likely than voluntary registrants to have found a job within two months after Employment Service registration, even though no significant difference was found in the number of personal contacts made with employers during this period. In light of this finding, and because of the personnel constraints faced by most local offices, it is recommended that:

> a comprehensive experimental program be undertaken which would make Employment Service registration for job-search assistance voluntary at the applicant's initiative. Such a program would include the identification of a control group comprised of unemployment insurance and public welfare payment recipients who would continue to meet current registration requirements. The objective of this program would be to evaluate the resulting reallocation of resources. Would UI and DPA recipients remain unemployed longer if they were not required to register with the Employment Service? Would they make less use of Employment Service placement services? Would the change in Employment Service operations result in more effective service to the voluntary registrants? Would employer costs rise because of extended duration of covered unemployment? What group or groups would benefit from such an operational change, and which would incur greater costs? A comprehensive benefit-cost evaluation of the suggested program is both feasible and timely.

What relationship exists between this recommendation and the SLMI program? As indicated before, some applicants apparently welcome the chance to check out almost any lead to a possible job, while others are less enthusiastic. Status as an unemployment insurance claimant was not found to be significantly related to the level of search activity. Therefore, a pilot study is in order to test the possibility that resources now devoted to the compulsory (with important exceptions) registration of unemployment insurance claimants could be put to better use. Statutory provisions may prohibit such a study at the present time, but waivers might be secured for an experimental program which could substantially alter the role of the Employment Service vis-a-vis unemployment insurance benefit claimants.

2. At the present time the job-preparedness of welfare recipients in the Commonwealth of Pennsylvania is determined by Department of Public Assistance caseworkers. Until recently, if the welfare recipient was determined to be job-ready, he was referred to the Employment Service for job-search assistance.[1] The effectiveness of this policy comes into question when the findings of Chapter 7 are recalled. Out of 37 welfare recipients interviewed two weeks after they registered with the Employment Service, three had found jobs. Six weeks later, out of 22 welfare payment recipients contacted, none of whom had secured jobs during the initial two-week period, not one had found a job. The answer to the apparent deficiency of the present procedure may not lie in better job-search assistance, but rather in a more refined identification procedure of job-preparedness. This, of course, has been noted in the first recommendation set forth in this chapter.

3. A major problem confronting every local office manager is the necessity for him to allocate scarce personnel time to registration and record keeping functions for registrants who do not really need (or want) to be helped. It is in this context that the recommendation on voluntary application has been stated. In addition, however,

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[1] A recent amendment of the Social Security Act includes a work incentive program which requires the referral of all 'appropriate' welfare recipients for either placement or pre-placement services. The latter includes such services as basic health and education. See Public Law 90-248, 90th Congress, H.R. 12080, January 2, 1968, Title 2, Part 1, Section 204.

it was found in the follow-up interviews that a number of the participants had found jobs without Employment Services assistance within a two-week period. Others had moved from the area. Still others were given specific job referrals, but declined to visit the employers because they were already working or had a lead on a job through another source of information. Therefore, it is recommended that:

> Continuing experimentation should be conducted to find a feasible technique to purge more frequently the active applicant file in the local Employment Service offices of records for people who have found jobs through other channels, for those who move out of the labor market area, and for those who no longer want assistance in finding a job for any other reason.

There is at the present time a formal mechanism for a 30 to 60 day purging of the application records representing the flow of registrants through an Employment Service office. However, if a formal procedure could be introduced which would make notification of desired deactivation a tradition in the use of Employment Service programs, the identification of those who are in need of continuing, or even increased, attention could be more easily accomplished. Since the request for deactivation would have to come voluntarily, some incentive device would have to be conceived of in the early stages to encourage notification.

4. The local transportation question is an exceptionally difficult one to cope with. Immobility is defined relative to an existing price structure. When the probability of success in the search effort surpasses some critical level every potential job holder will become an active job seeker. This critical probability value and its determinants, of course, vary among individuals. This means that

the context in which labor market information is given, and the degree of confidence which is instilled in the job seeker as to its potential value, will affect the degree of mobility in the search effort. Some unemployed job seekers for instance cannot gain access to a car, or cannot drive, and are thereby narrowly constrained in their search effort. Some assistance other than mere information may be needed to help such people, although access to a car was not significantly related to job-search success in the present program. It is therefore recommended that:

> the provision of public and private transportation services should be carefully evaluated to determine the effectiveness of this type of program in eliminating the barriers to employment confronting residents of urban cores and other residential areas which are isolated from many employment opportunities.

Experimental bus services are being provided in St. Louis and Washington D.C. An intensive socioeconomic evaluation is being conducted as an integral part of the St. Louis program.

The recommendations made here flow directly out of the experience gained in conducting and evaluating the supplemental labor market information experiment. Numerous other questions are raised by the findings presented in this report.

In addition, this experience requires the author to strongly concur with the recent recommendations made by the Advisory Committee on Research for the U.S. Employment Service, presented in a report to the Director dated February 1968, and titled _Labor Market Information and the Federal-State Employment Service System_. The need for continuing formal procedures for technical, utility, and cost-benefit evaluation of labor market information programs is particularly critical.

However, the potential of a substantially improved labor market information system would still be limited. Labor market information has no direct effect on aggregate demand, although there are obvious secondary effects; it has no effect on a job seeker's basic qualifications for job performance; it has little effect on a person's desire to seek work; and it has virtually no effect on institutional barriers to job-search success. It is not, in short, a panacea for all the inadequacies of the existing labor market mechanism.

APPENDICES

APPENDIX A

PRIMARY D.O.T. CODES OF SLMI PROJECT PARTICIPANTS

Introduction

This appendix presents the six-digit occupational codes shown for the 777 participants in the SLMI experimental program. The codes are presented in ascending numerical order under the appropriate classification headings which indicate the first-digit designations from the Third Edition, *Dictionary of Occupational Titles*. The numbers in parentheses after some of the six-digit D.O.T. codes indicate the number of subjects whose records showed that D.O.T. code as their primary skill area. All six digits of the occupational codes for fourteen subjects are not known.

Professional, technical, and managerial

184168

Clerical and sales

Service

316884
363782
372868 (2)

Farming, fishery, forestry, and related

407181
407887 (7)

Processing

500380
500885
501782
503885 (2)
504782 (2)
504886

Processing (continued)

509886 (34)
509887
514884
518381 (4)
519131 (2)
519884
519886
519887 (7)
520885
525884 (2)
526130
526781 (2)
526886 (2)
529887
550782
550885
556885
559887
570885
575885
579131
579684
579886 (2)
589887
599885

Machines trades

600280 (6)
600380 (4)
601280 (2)
601281 (2)
601381
603280 (3)
603782
604380 (2)
604782
604885 (2)
605782
606380 (2)
606782 (5)
607782
609380
609382
609684
609884 (2)
609885 (4)
609887
610381
612281
612885
613130
613782 (2)
613885 (2)
614782 (2)
615782 (9)
615885
616130
616380 (5)
616885 (2)
617782
617885 (7)
619381
619782 (3)
619884
619885 (4)
619887 (2)
620281 (19)
620381 (7)
620884 (4)
622887
625281 (4)
625884

Machines trades (continued)

637281 (2)
637781
638131
638281 (4)
638884 (5)
639281
641885
649780 (4)
649885
650582
651782 (3)
651886
660280 (5)
661281 (2)
669885
699138

Bench work

704884
705884 (11)
706884 (2)
706887
709884
710281
713381
713884
721281
723381
724884 (2)
726281
727884
729387
729684
729884 (2)
729887
739381
740887
741884 (3)
762884
763884
775884
779884
780381

Bench work (continued)

780884
785261
785281

Structural work

801281 (3)
801381
801887
804281 (2)
805781 (2)
806381 (2)
806781
806887
807381 (4)
809884 (14)
810782
810884 (22)
812884 (9)
814884
816884 (10)
819887
821381
821887
823281
823884
824281 (3)
825381
825884
827281
828281 (8)
829281 (2)
829887 (8)
840781 (8)
840884 (2)
840887
841781
842781 (2)
843884
844884
845781
850281
850883

Structural work (continued)

851887
852887
859883 (3)
859887
860381 (3)
860384
860887 (3)
861781
861884
861887
862381 (2)
862884 (7)
864781
865781
866381 (3)
866887 (2)
869137
869281
869884 (9)
869885 (3)
869887 (17)
891885
892883 (11)
899281
899381 (5)
899884 (2)

Miscellaneous

900883 (2)
902883 (3)
904883 (8)
905883 (37)
905887 (6)
906883 (43)
909887
910287 (2)
910383 (3)
910868
910884
910887 (2)
911782
911887 (2)

Miscellaneous

912887
913168
913883
913463 (3)
915867 (4)
915887
919887 (4)
920885 (4)
920887 (6)
921883 (12)
921887
922883 (6)
922887 (37)
929133
929138 (2)
929887 (50)
950782 (8)
951885 (3)
972381
972382
976687
977884
979381

APPENDIX B: JOB TITLES OF POSITIONS LOCATED BY THE PARTICIPANTS, BY TIME PERIOD AND GROUP (EXCLUDING RECALLS)

	Initial Two-Weeks		Subsequent Six-Weeks	
Job Title	Experimental	Control	Experimental	Control
	N	N	N	N
Laborer	15	16	13	13
Truck Driver	3	3	5	6
Machine Operator	3	5	3	-
Welder	3	4	3	1
Porter	3	-	-	-
Supervisor	2	1	-	-
Garage Attendent	2	-	-	1
Clerk	2	1	3	-
Electrician	2	1	-	-
Electronic Technician	2	-	-	-
Painter	2	-	-	1
Mechanic	1	2	4	1
Warehouseman	1	2	3	4
Fitter	1	1	-	1
Maintenance	1	1	1	1
Optical Work	1	1	-	-
Bus Boy	1	-	-	-
Hod Carrier	1	-	-	-
Tool Setter	1	-	-	-
Chemical Operator	1	-	-	-
Groundsman	1	-	-	-
Shipper	1	-	-	-
Baler	1	-	-	-
Sheetmetal Worker	1	-	-	-
Garbage Collector	1	-	-	-
Counterman	1	-	-	-
Loader	1	-	2	1
Auto Body Repair	1	-	-	-
Guard	1	-	-	1
Fireman	1	-	-	-
Molder	1	-	-	1
Solderer	1	-	-	-
Millwright	1	-	-	2
Engineering Assistant	1	-	-	-
Inspector	-	2	1	-
Salesman	-	2	-	1
Plasterer	-	1	-	-
Furniture Construction	-	1	-	-
Machinist	-	1	1	1

APPENDIX B: JOB TITLES OF POSITIONS LOCATED BY THE PARTICIPANTS, BY TIME PERIOD AND GROUP (EXCLUDING RECALLS) (CON'T.)

Job Title	Initial Two-Weeks Experimental N	Initial Two-Weeks Control N	Subsequent Six-Weeks Experimental N	Subsequent Six-Weeks Control N
Carpenter's Helper	-	1	-	-
Bartender	-	1	2	-
Pattern Maker	-	1	1	-
Baker	-	1	1	-
Production Helper	-	1	-	-
Wrapper	-	1	-	1
Ramp Serviceman	-	1	-	-
Floorman	-	1	-	-
Boner	-	1	-	1
Stationary Engineer	-	1	1	-
Roofer's Helper	-	1	-	-
Gate Operator	-	1	-	-
Janitor	-	-	3	2
Carpenter	-	-	2	1
Cab Driver	-	-	2	-
Delivery	-	-	1	2
Mail Handler	-	-	1	-
Repairman	-	-	1	-
Film Developer	-	-	1	-
Sweeper	-	-	1	-
Interviewer	-	-	1	-
Child Care	-	-	1	-
Hoseman	-	-	1	-
School Bus Driver	-	-	1	-
Craneman	-	-	1	-
Meat Carrier	-	-	1	-
Elevator Operator	-	-	1	-
Dishwasher	-	-	1	-
Construction	-	-	1	-
Insurance Agent	-	-	1	-
Upholsterer	-	-	1	-
Tailor	-	-	-	1
Foreman	-	-	-	1
Packer	-	-	-	1
Operating Engineer	-	-	-	1
Laboratory Sampler	-	-	-	1
Computer Operator	-	-	-	1

APPENDIX B: JOB TITLES OF POSITIONS LOCATED BY THE PARTICIPANTS, BY TIME PERIOD AND GROUP (EXCLUDING RECALLS)
(CON'T.)

	Initial Two-Weeks		Subsequent Six-Weeks	
Job Title	Experimental N	Control N	Experimental N	Control N
Pile Driver	-	-	-	1
Dipper	-	-	-	1
Bottler	-	-	-	1
Switchman	-	-	-	1
Trainee (?)	-	-	-	1
Sears (?)	-	-	-	1

APPENDIX C: RESEARCH INSTRUMENTS

EXHIBIT I -- Labor Force Participation Chart

EXHIBIT II -- Employment History (Two Years) and Demographic Information

EXHIBIT III -- Prior Job Search Activity, SLMI list, and Matching Information

EXHIBIT IV -- Letter Sent to Participants Asking for Their Cooperation

EXHIBIT V -- First Follow-up Questionnaire (Two Week)

EXHIBIT VI -- Second Follow-up Questionnaire (Eight Week)

EXHIBIT I: LABOR FORCE PARTICIPATION CHART

Completed by the ES interviewer during the initial registration interview.

E | C

(Name—Last Name First)

LABOR FORCE PARTICIPATION CHART

Two Years Immediately Preceding Registration with the PSES

	1965									1966													1967						
	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July
Working	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Not Working	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Instructions: Check the appropriate boxes to indicate labor force status—be sure that one box is checked for each of the relevant twenty-four months. Denote one-half month where necessary by circling the appropriate box.

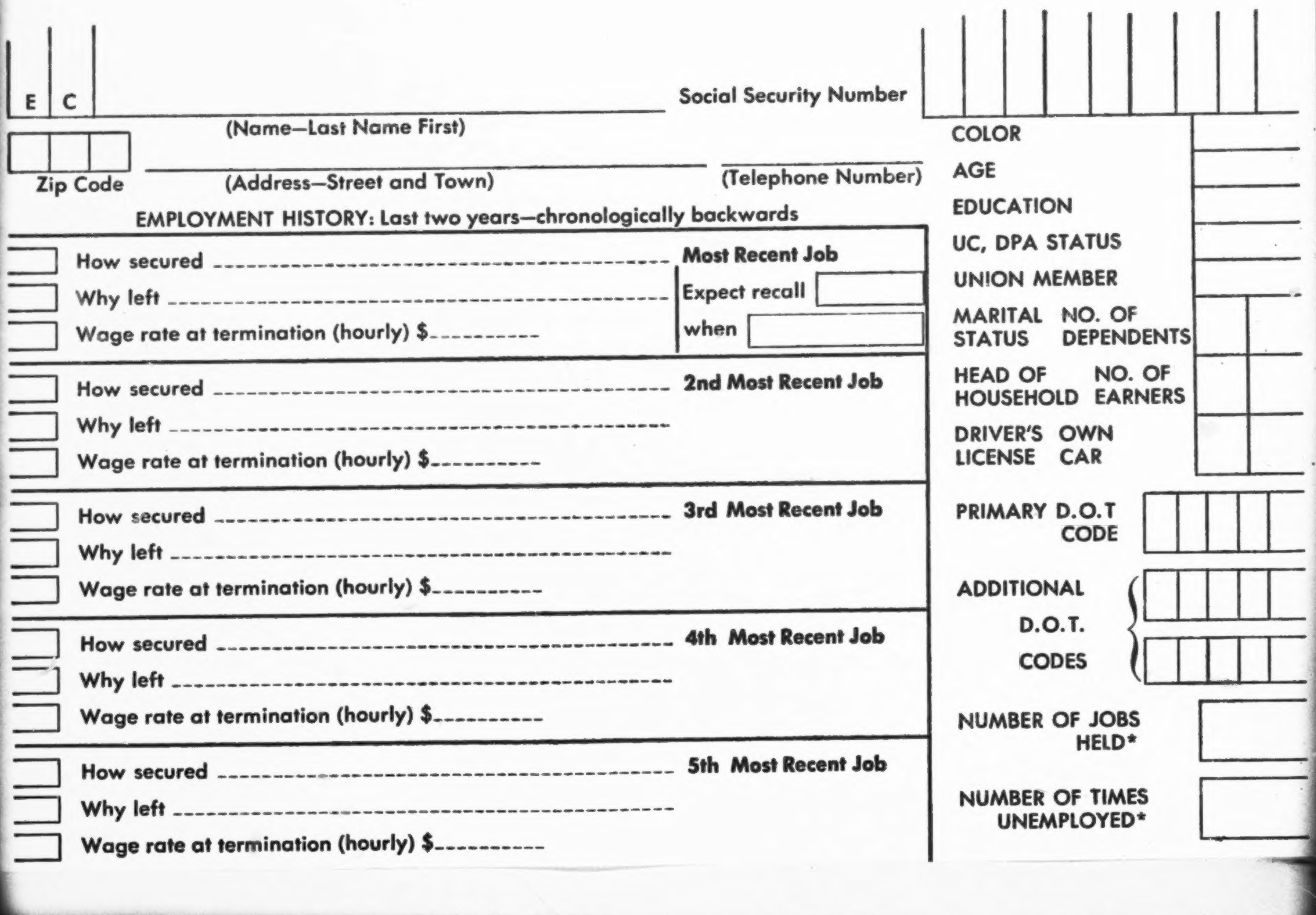
Distribution of Total Work Experience ☐ % ☐ % ☐ % = 100%

	Primary D.O.T.	Add'l Codes	Other	MONTHS
Most Recent Job	☐	☐	☐	______
2nd Most Recent Job	☐	☐	☐	______
3rd Most Recent Job	☐	☐	☐	______
4th Most Recent Job	☐	☐	☐	______
5th Most Recent Job	☐	☐	☐	______
			Total	______

Not Working	CODE	MONTHS
Most Recent	☐	______
2nd Most Recent	☐	______
3rd Most Recent	☐	______
4th Most Recent	☐	______
5th Most Recent	☐	______
Total		______

XHIBIT II: TWO YEAR EMPLOYMENT HISTORY AND DEMOGRAPHIC INFORMATION

Partially completed by the Employment Service interviewer during the initial registration interview, and partially by the project clerk from Employment Service operating records (primarily the ES-511 Application Form.) This is the front side of a card, the back of which is Exhibit III.



E C

Social Security Number

(Name—Last Name First)

Zip Code

(Address—Street and Town)

(Telephone Number)

COLOR

AGE

EDUCATION

UC, DPA STATUS

UNION MEMBER

MARITAL STATUS

NO. OF DEPENDENTS

HEAD OF HOUSEHOLD

NO. OF EARNERS

DRIVER'S LICENSE

OWN CAR

PRIMARY D.O.T CODE

ADDITIONAL D.O.T. CODES

NUMBER OF JOBS HELD*

NUMBER OF TIMES UNEMPLOYED*

EMPLOYMENT HISTORY: Last two years—chronologically backwards

Most Recent Job

How secured

Why left

Wage rate at termination (hourly) $

Expect recall

when

2nd Most Recent Job

How secured

Why left

Wage rate at termination (hourly) $

3rd Most Recent Job

How secured

Why left

Wage rate at termination (hourly) $

4th Most Recent Job

How secured

Why left

Wage rate at termination (hourly) $

5th Most Recent Job

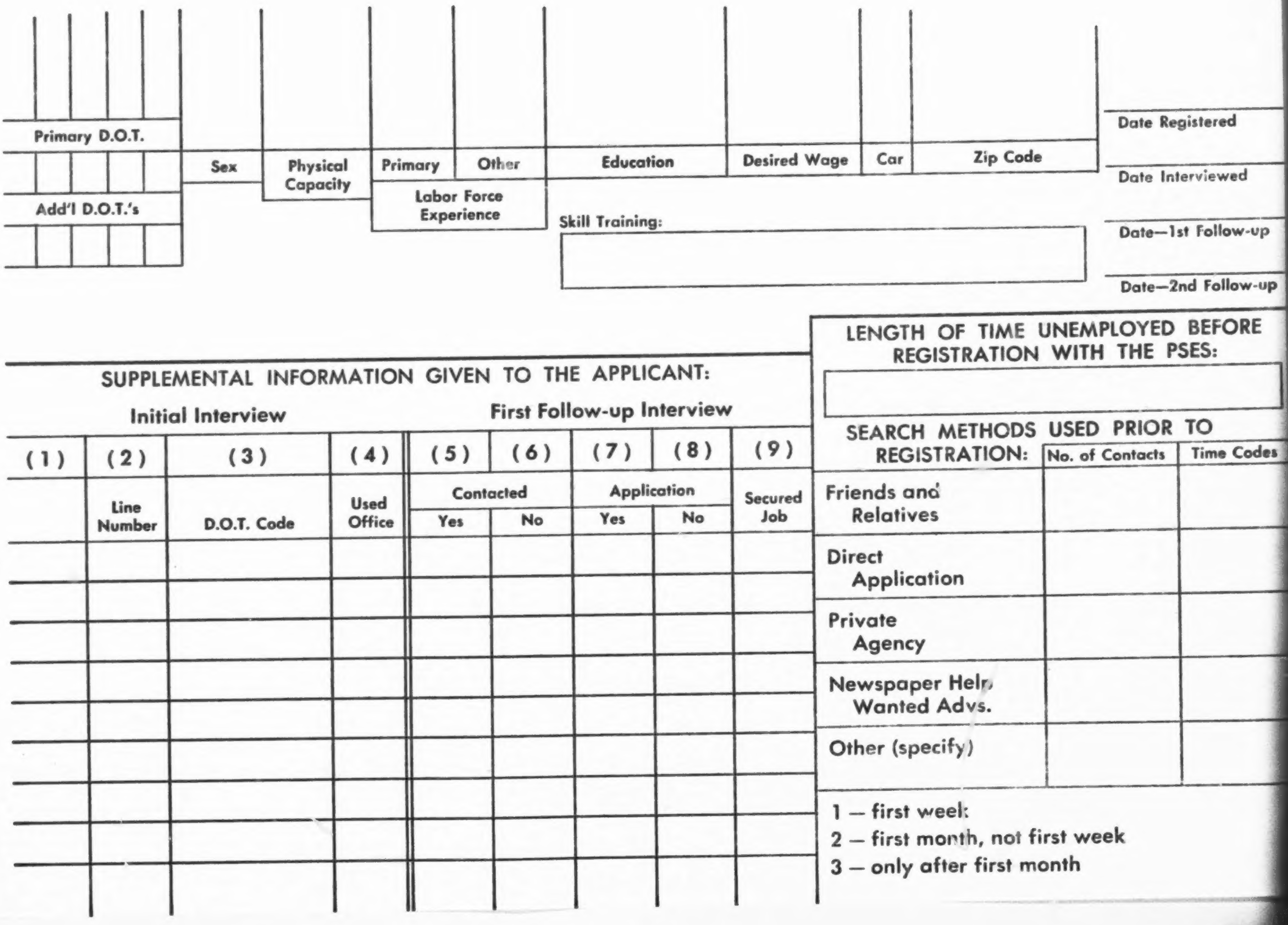
How secured

Why left

Wage rate at termination (hourly) $

XHIBIT III: PRIOR JOB-SEARCH ACTIVITY, SLMI LIST, AND MATCHING INFORMATION

Partially completed by the Employment Service interviewer during the initial registration interview, and partially by the project clerk from carbon copies of the SLMI given to participants in the experimental group. The version of this side of the card which was used for participants in the control group only included the prior search activity section.



Primary D.O.T.	Sex	Physical Capacity	Primary	Other	Education	Desired Wage	Car	Zip Code
			Labor Force Experience					
Add'l D.O.T.'s					Skill Training:			

Date Registered

Date Interviewed

Date—1st Follow-up

Date—2nd Follow-up

SUPPLEMENTAL INFORMATION GIVEN TO THE APPLICANT:

Initial Interview				First Follow-up Interview				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Line Number	D.O.T. Code	Used Office	Contacted		Application		Secured Job
				Yes	No	Yes	No	

LENGTH OF TIME UNEMPLOYED BEFORE REGISTRATION WITH THE PSES:

SEARCH METHODS USED PRIOR TO REGISTRATION:	No. of Contacts	Time Codes
Friends and Relatives		
Direct Application		
Private Agency		
Newspaper Help Wanted Advs.		
Other (specify)		

1 — first week

2 — first month, not first week

3 — only after first month

IBIT IV: LETTER SENT TO PARTICIPANTS ASKING FOR THEIR COOPERATION

This letter was sent to each participant on the ninth day after his initial registration interview in the Employment Service office.

THE PENNSYLVANIA STATE UNIVERSITY
411 BOUCKE BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

Institute for Research
on Human Resources

Area Code 814
865-9561

The Pittsburgh District of the Pennsylvania State Employment Service is cooperating with the Institute for Research on Human Resources at The Pennsylvania State University to carry out a research project whose purpose is to increase the effectiveness of the state's service to unemployed workers.

In connection with this cooperative effort your name has been selected from the files of the employment service to be included in this research project. Approximately 800 others are being contacted over a two month period.

A representative of The Pennsylvania State University will call at your home on . If you will not be at home that day could you please return the enclosed card indicating what day you would be available. A member of our research team will be calling you within the next day or so to set a specific time for the interview. Therefore, if the phone number you gave to the Employment Service is not correct please indicate on the card where you can be reached.

The purpose of the visit will be to ask you a few questions about your experiences in looking for work. The interview will take from 10-15 minutes of your time. The answers you give will be solely for the use of the research group at The Pennsylvania State University. In fact, your name will not appear on the questionnaire, so that even they will not be able to identify you personally. Your experiences will be grouped with those of the other 800 participants in the study for statistical analysis. Again, no one other than The Pennsylvania State University research team will know what you say.

We look forward to your willingness to participate in this study. Others (and perhaps you) will benefit from the improvement of services provided by The Pennsylvania State Employment Service as a result of this project. Thank you.

Sincerely,

Jacob J. Kaufman

Jacob J. Kaufman, Director
Institute For Research on
Human Resources
The Pennsylvania State University

EXHIBIT V: FIRST FOLLOW-UP QUESTIONNAIRE (TWO WEEK)

Pages 1, 3, 4, and 5 are common to both the experimental and control group questionnaires. Page 2 was only used in the control group questionnaire, and pages 2A, 2B, and 2C were only used in the experimental group questionnaire.

This interview was conducted in the home of the participant.

Budget Bureau No.
44-S67023; Approval
Expires June 1, 1968

FIRST FOLLOW-UP QUESTIONNAIRE

SUPPLEMENTAL LABOR MARKET INFORMATION PROJECT

INSTITUTE FOR RESEARCH ON HUMAN RESOURCES AT
THE PENNSYLVANIA STATE UNIVERSITY

IN COOPERATION WITH

THE PENNSYLVANIA STATE EMPLOYMENT SERVICE

UNDER CONTRACT WITH

THE OFFICE OF MANPOWER POLICY, EVALUATION
AND RESEARCH, U.S. DEPARTMENT OF LABOR

Scheduled Date of Interview ____________________

Scheduled Time of Interview ____________________(A.M., P.M.)

Actual Date of Interview ____________________

File No. ____________

1. **When you were interviewed by the Employment Service two weeks ago, you did not have a job. Are you employed at the present time or have you held a job since that interview on ____________________? When I say "job", I mean a full- or part-time job which you expected to last more than one week when you accepted it.**

( ) NO
( ) YES → (PROBE: **How many different jobs have you held?)** ________

(IF "YES," HAND RESPONDENT CARD AND ASK:)

1A. **Could you tell me when you started work on the (first) job?**
(MARK "S-1")

Initial interview
Date __________________

Day of
the Week

____ ____ ____ ____ ____ ____ ____

☐ ☐ ☐ ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐ ☐ ☐

⬚ ⬚ ⬚

Follow-up interview
Date __________________

1B. **Are you still working in that job?**

( ) YES
( ) NO

(IF "NO," ASK:)

1BA. **When did you leave that job?** (MARK "L-1", DRAW LINE)

1BB. **Have you held another job since leaving that one?**

( ) NO
( ) YES

(IF "YES," ASK:)

1BBA. **When did you start and leave that one?**
(MARK "S-2" and "L-2")

(REPEAT FOR ANY OTHER JOBS INDICATED USING "S-3,4,5" and "L-3,4,5")

(TAKE BACK CARD)

2. **How many days out of the ______ days which have passed since ____________________ were you free to look for a job?** ____________

Now I would like to ask you a few questions about HOW you looked for jobs during the two weeks since
____.

3. **Did you contact ANY employers, either by phone or in person, during the last two weeks in looking for a job?**

( ) NO or DON'T REMEMBER
( ) YES, PHONE → (PROBE: **How many different firms?**) ________
( ) YES, PERSON → (PROBE: **How many different firms?**) ________

(IF "YES, PHONE," ASK:)

3A. **Can you tell me what SOURCE OF INFORMATION led you to contact these employers by PHONE?** (INTERVIEWER: USE LIST TO PROBE ONLY. ENTER NUMBER OF FIRMS IN APPROPRIATE BOXES.)

PHONE ( ) NA	PERSON ( ) NA	
☐	☐	Employment Service referral
☐	☐	Application without knowledge of openings
☐	☐	Friends and relatives
☐	☐	Private employment agency
☐	☐	Newspaper ads
☐	☐	Other ______________________________________

(IF "YES, PERSON," ASK:)

3B. **Can you tell me what SOURCE OF INFORMATION led you to contact these employers IN PERSON?** (INTERVIEWER: USE LIST TO PROBE ONLY. ENTER NUMBER OF FIRMS VISITED IN APPROPRIATE BOXES.)

3C. (HAND RESPONDENT CARD) **Can you tell me on WHAT DAY you personally visited each firm? For example, you were in the Employment Service office on** ____________________. **Did you go to any employers on that day?** (INTERVIEWER: CIRCLE DATES AND ENTER NUMBER OF FIRMS VISITED)

____	____	____	____	____	____	____
☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐

(TAKE BACK CARD)

3D. **Had you contacted any of these firms by PHONE prior to visiting them?**

( ) YES → (PROBE: **How many?**) ________
( ) NO
( ) DON'T REMEMBER

Now I would like to ask you a few questions about HOW you looked for jobs during the two weeks since

------------------------.

3. **Did you contact ANY employers, either by phone or in person, during the last two weeks in looking for a job?**

( ) NO or DON'T REMEMBER
( ) YES, PHONE → (PROBE: **How many different firms?**) --------
( ) YES, PERSON → (PROBE: **How many different firms?**) --------

(IF "YES, PHONE," ASK:)

3A. **Can you tell me what SOURCE OF INFORMATION led you to contact these employers by PHONE?** (INTERVIEWER: USE LIST TO PROBE ONLY. ENTER NUMBER OF FIRMS IN APPROPRIATE BOXES.)

PHONE	PERSON	
( ) NA	( ) NA	
☐	☐	Employment Service referral
☐	☐	Application without knowledge of openings
☐	☐	Friends and relatives
☐	☐	Private employment agency
☐	☐	Newspaper ads
☐	☐	Supplemental labor market information
☐	☐	Other --

(IF "YES, PERSON," ASK:)

3B. **Can you tell me what SOURCE OF INFORMATION led you to contact these employers IN PERSON?** (INTERVIEWER: USE LIST TO PROBE ONLY. ENTER NUMBER OF FIRMS VISITED IN APPROPRIATE BOXES.)

3C. **Did you contact IN PERSON ANY OF THE FIRMS WHOSE NAMES WERE GIVEN YOU IN YOUR INTERVIEW WITH THE EMPLOYMENT SERVICE two weeks ago? Do not include any specific job referral you may have had since that time.**

( ) NO (PROBE: **Why not?**) --

( ) YES

(IF "YES," REFER TO LIST ON NEXT PAGE AND ASK:)

3CA. **How did you decide whether or not to PERSONALLY visit each of the firms whose names were given to you? I will read the name of each firm from a copy of the list given you two weeks ago, and I would like you to tell me why you did or did not PERSONALLY visit that firm.** (USE COLS A,B & F)

Line 1 Go to 3X, P. 2C

Line 2 Go to 3D, P. 2C

FIRM #	NO CON (A)	PER CON (B)	TEL BEF (C)	TEL INS (D)	ORDER VISIT (E)	TIME LAPS	REASON (F)
1.	☐	☐	☐	☐	☐		------------------------
2.	☐	☐	☐	☐	☐		------------------------
3.	☐	☐	☐	☐	☐		------------------------
4.	☐	☐	☐	☐	☐		------------------------
5.	☐	☐	☐	☐	☐		------------------------
6.	☐	☐	☐	☐	☐		------------------------
7.	☐	☐	☐	☐	☐		------------------------
8.	☐	☐	☐	☐	☐		------------------------

Line 1 Go to 3X, P. 2C

Line 2 Go to 3D, P. 2C

3CB. Which of these firms did you TELEPHONE BEFORE (COL C) or INSTEAD OF (COL D) visiting the firm in person?

(IF ANY FIRMS PERSONALLY VISITED (COL B), ASK:)

3CBA. Could you tell me the ORDER in which you visited the firms you did personally contact? (COL E)

3CBB. (HAND RESPONDENT CARD) **Do you remember the DAY you visited each of these firms? For example, you received the list on ____________________. Did you visit any on that day?** (INTERVIEWER: CIRCLE DATES AND ENTER THE FIRM NUMBER)

____	____	____	____	____	____	____
☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐

(TAKE BACK CARD)

3CBC. Did you fill out the employer's job application form at any of the firms you personally visited?

( ) NO
( ) YES → (PROBE: **Which ones?**) ___,___,___,___
___,___,___,___

(IF "YES," ASK:)

3CBCA. Did you receive any actual job offers from any of these firms?

( ) NO
( ) YES → (PROBE: **Which ones?**)
___,___,___,___,___,___,___,___

Line 3 Go to 3D, P. 2C

3CBD. Did you tell the person at the gate or the personnel office of those firms you did contact from the list given you by the Employment Service that the Employment Service suggested you look for a job there?

( ) NO
( ) YES → (PROBE: **Did they say anything about your having been sent by the Employment Service? What?**) ______________________________
____
____
____

Line 1 Go to 3X

3D. **Let's review the number of firms you PERSONALLY visited in the last two weeks.**

3DA. **How many did you visit altogether?** → ________ FIRMS

3DB. **How many firms did you visit that were on the list given you by the Employment Service?** → ________ FIRMS

________ DIFFERENCE

3DC. (HAND RESPONDENT CARD) **You, then, visited** (Difference) **firms that were** not **on the list given you. Can you tell me on what days you visited each of these firms?** (INTERVIEWER: CIRCLE DATES AND ENTER NUMBER OF FIRMS)

___ ___ ___ ___ ___ ___ ___

☐ ☐ ☐ ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐ ☐ ☐

(TAKE BACK CARD)

3X. **You are one of the first persons to have received a list of firms using job skills similar to yours. This program is being tried out as one way of helping people find jobs. It will help us if you tell me frankly what you think of this program.** (PROBE FOR COMMENTS REGARDING: Distance of firms from subject's house, wage rates, and suggestions for improvement of the procedure.)

____

____

____

____

____

____

____

____

____

____

4. **How many job offers (total) did you receive during the two weeks since your interview on __________? Include all actual job offers which meet our definition: "expected the job to last more than one week".**

( ) NONE
( ) HAD OFFER: ➤ Number = _________

(IF "HAD OFFER," ASK:)

4A. **How many jobs have you actually held since that date?**

( ) NONE
( ) HELD JOB(S): ➤ Number = _________

(IF "HELD JOB(S)," ASK:)

4AA. **What was the source(s) of information which led you to the employer(s). For example, where did you FIRST hear about the first job opening?** (PROBE: The second? The third? (EXPERIMENTAL ONLY PROBE: IF "EMPLOYMENT SERVICE" MENTIONED, DETERMINE IF A SPECIFIC JOB REFERRAL WAS MADE OR IF SLMI LIST WAS USED)

1st Job ____

2nd Job ____

4AB. **What was the job title or job description of each of these jobs?**

1st Job ____
____

2nd Job ____
____

4AC. **What was the HOURLY WAGE RATE you received when you accepted the job?**

(PROBE: ARE TIPS AND COMMISSIONS, OR OTHER "EXTRA" COMPENSATION RECEIVED IN CONNECTION WITH THIS JOB?)

1st Job $__________	( ) YES	( ) NO
2nd Job $__________	( ) YES	( ) NO

5. **On the basis of your own recent experience, what would you say is the single best source of information about job openings in your type of work?**

____

6. **Are there any employers in the area whom you know hire people with your skills but with whom you do not check when you are looking for a job?**

( ) NO
( ) YES ➤ (PROBE: Why not?)____________________________________
____
____

7. **Let me check again, are you presently employed or unemployed?**

( ) EMPLOYED
( ) UNEMPLOYED

(IF "UNEMPLOYED," ASK:)

7A. **What do you think is the single most important reason that is preventing you from getting a satisfactory job?**

____

____

7B. **What methods of looking for a job do you intend to use now?** (INTERVIEWER: USE LIST AS PROBE ONLY)

( ) Ask friend or relative
( ) Apply directly to firms without prior knowledge of opening
( ) Read newspaper ads
( ) Go to private employment agency
( ) Other ____

Now, I would like to ask you a few questions about the sources of income you had before and during this recent period of unemployment—that period beginning shortly before ____________________, the day you were interviewed by the Employment Service.

8. **What source(s) of support have you had during this period of unemployment?** (INTERVIEWER: DO NOT READ LIST)

( ) Unemployment compensation
( ) Public assistance
( ) Borrowing
( ) Drawing on savings
( ) Other earner(s) in household
( ) Non-monetary support (food or housing)
( ) Other ____

(PROBE: Mention those not mentioned and circle)

The word "HOUSEHOLD" is used in several of the following questions to include you and all those who depend upon your support on a regular basis whether or not they live with you or are related to you. DO YOU UNDERSTAND WHAT I MEAN WHEN I SAY "HOUSEHOLD"? ( ) YES ( ) NO ➤ repeat

9. **How much money (after deductions) do you think a household the size of yours needs each week to maintain an "adequate" standard of living? By "adequate", I mean "satisfactory" or "acceptable".**

$__________________

10. **How much money has your household had to live on each week (after deductions) during your current period of unemployment?**

$__________________

11. **How much did your household have to live on each week (after deductions) during the last few months before you became unemployed or started looking for work?**

$____________________

11A. **What proportion of this amount did you contribute each week (after deductions) on the average?**

______________**% or $**______________

12. **How long have you worked in Allegheny County?**

______________ **(Months, years)**

13. **How many cities or towns have you worked in—outside Allegheny County—during the last five years?**

____

(INTERVIEWER: Thank respondent for his cooperation and reiterate the confidential nature of his answers. Tell him that he will be contacted again in six weeks by telephone to answer a few questions relating to his labor force status at that time.)

* *

Time Interview Started ______________ **AM PM**

Time Interview Ended ______________ **AM PM**

TOTAL TIME ______________

Attempt One __________________ **( ) Complete** **Verified on** _____________ **by** _____________

Attempt Two __________________ **( ) Complete** **Reviewed on** _____________ **by** _____________

Attempt Three __________________ **( ) Complete**

Certification of conduct and integrity of this interview:

____ ____________________

(Interviewer's Signature) **(Date)**

EXHIBIT VI: SECOND FOLLOW-UP QUESTIONNAIRE (EIGHT WEEK)

This questionnaire was completed during a telephone interview with the participant. The instrument is designed so that a single questionnaire would serve both experimental and control group requirements.

Spacing and type differ from original questionnaire.

Budget Bureau No.
44-567031, Approval
Expires June 1, 1968

Page Reference

____

SECOND FOLLOW-UP QUESTIONNAIRE

SUPPLEMENTAL LABOR MARKET INFORMATION PROJECT

INSTITUTE FOR RESEARCH ON HUMAN RESOURCES AT
THE PENNSYLVANIA STATE UNIVERSITY

IN COOPERATION WITH

THE PENNSYLVANIA STATE EMPLOYMENT SERVICE

UNDER CONTRACT WITH

THE OFFICE OF MANPOWER POLICY, EVALUATION
AND RESEARCH, U.S. DEPARTMENT OF LABOR

Group ( ) CONTROL
( ) EXPERIMENTAL

Employment ( ) UNEMPLOYED
( ) EMPLOYED as ____________________
with ____________________

Date of Employment Service Interview ________
Date of 1st Personal Interview ____________
Scheduled Date of This Interview ____________

Number of Phone Attempts 1 2 3 4 5 6 7 8
Complete on Call No 1 2 3 4 5 6 7 8
Incomplete by phone because ____________
____

____________________________ ____________
(Phone Interviewer's Signature) (Date)

File No. ____________

My name is ______________________. I am calling on behalf of The Pennsylvania State University. You were interviewed by another member of our staff approximately six weeks ago concerning your search for work. At that time you were told you would be contacted one more time. This conversation is the last time we will be asking you to spend a few minutes answering our questions.

( ) UNEMPLOYED → Start where indicated on top of Page 2
( ) EMPLOYED → Start Question 1

1. Are you still working for the same employer you were with when we talked to you six weeks ago?

( ) NO → Go to top of next page, (Question 1D)
( ) YES

IF "YES," ASK:

1A. At that time you were working as a ______________________
Are you still doing the same thing (performing the same tasks)?

( ) NO
( ) YES

IF "YES," ASK:

1AA. Have you received a pay increase?

( ) YES → PROBE: What is your new hourly rate? $ ________

( ) NO

→ (GO TO QUESTION 2, PAGE 3) ←

IF "NO," ASK:

1AB. When did you switch jobs? (Day-Date) ______________

1AC. Why did you switch jobs? ______________________
____

1AD. What is your new job title or description? __________
____

1AE. What is the hourly wage rate of the new job? $______

1AF. Are tips, commissions or other "extra" compensation received in connection with this new job?

( ) YES
( ) NO

(GO TO QUESTION 2, PAGE 3) ←

IF "NO," ASK:

1B. What was the last day you worked on the job?

(Day-Date) ____________________

1C. Why did you leave that job? ____________________

IF UNEMPLOYED START Use "a" → 1D. What source(s) of information have you USED to look for (another) (a) job? (CHECK RESPONSE, THEN PROBE)

	Used	Number	1st Job
a. In-person application without prior knowledge of job opening			
b. Friends and relatives			
c. Private employment agencies			
d. Newspaper ads			
e. Pennsylvania State Employment Service (NOT LIST)			
f. EXPERIMENTAL ONLY - Supplemental labor market information (LIST)			
g. Other ____________________			

1E. Can you tell me the NUMBER of actual in-person contacts you made with employers as a result of each source you mentioned? (ENTER NUMBER BESIDE EACH MENTIONED)

1F. Did you secure (another)(a) job? By "job" I mean a full- or part-time job which you expected to last more than one week when you took it?

( ) YES
( ) NO ——→ 1GG top of Page 3

IF "YES," ASK:

1GA. What sources of information led you to securing this job? (CHECK UNDER FIRST JOB 1C ABOVE)

IF "YES," ASK:

1GB. What day did you start work? (Day-Date) ________________

1GC. What was your job title or description? ________________

1GD. What was your hourly wage rate? $____________

1GE. Are tips, commissions or other "extras" received in connection with this job?
( ) YES
( ) NO

1GF. Are you still working on that job?

( ) YES
( ) NO ——→ To Supplement

☐

Supplement(s) Used

IF "NO," ASK:

1GG. Can you tell me what you think is the single most important reason that is preventing you from getting a satisfactory job? ____

____

1GH. What sources of information do you intend to use now in looking for a job?

a( )Ask friends or relatives

b( )Apply directly to firms without prior knowledge of job

c( )Read newspaper ads

d( )Go to private employment agencies

e( )EXPERIMENTAL-Supplementary labor market information (LIST)

f( )Other ____

1GI. Have you changed your mind about the type of job you are looking for as the length of time you have been out of work increases?

( ) YES ——→ PROBE: In what ways? ____________________
( ) NO
____

Now I would like to read you two statements and ask you whether you strongly agree, agree, disagree, strongly disagree or are undecided about each.

	SA	A	U	D	SD
1GJ. I think there are many employers who would hire me --	( )	( )	( )	( )	( )
1GK. If I try hard enough, I will find a job --	( )	( )	( )	( )	( )

1GL. Which one of the following statements best explains your attitude toward the PAY you would be willing to take?

a( )would have to be HIGHER than my last job

b( )would have to be about the SAME as my last job

c( )could be LOWER than my last job

2. Could you tell me how many children your mother had? ____________ CHILDREN

IF TWO OR MORE, ASK:

2A. How many were older than you? ____________ OLDER

THANK RESPONDENT FOR HIS COOPERATION

INSTITUTE FOR RESEARCH ON HUMAN RESOURCES
THE PENNSYLVANIA STATE UNIVERSITY
BOUCKE BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

Publications

The Role of the Secondary School in the Preparation of Youth for Employment, The Pennsylvania State University. by Jacob J. Kaufman, Carl J. Schaefer, Morgan V. Lewis, David W. Stevens, and Elaine W. House, February 1967. 339 pp. $2.

A Community Organizes for Action: A Case Study of the Mon-Yough Region in Pennsylvania, The Pennsylvania State University. by Robert W. Avery and Herbert A. Chesler, July 1967. 105 pp. $1.

The Development and Utilization of Human Resources: A Guide for Research, The Pennsylvania State University. by Jacob J. Kaufman, Grant N. Farr, and John C. Shearer, July 1967. 77 pp. $1.

An Analysis of the Comparative Costs and Benefits of Vocational Versus Academic Education in Secondary Schools, (Preliminary Report), The Pennsylvania State University. by Jacob J. Kaufman, Ernst W. Stromsdorfer, Teh-wei Hu, and Maw Lin Lee, October 1967. 156 pp. $5.

Manpower Perspective in the Health Services, The Pennsylvania State University, April 1968. 27 pp. gratis.

The Potential of Vocational Education: Observations and Conclusions, The Pennsylvania State University. by Jacob J. Kaufman and Morgan V. Lewis, May 1968. 134 pp. $2.

The School Environment and Its Influence on Educational Programs for High School Dropouts, The Pennsylvania State University. by Jacob J. Kaufman and Morgan V. Lewis, assisted by David C. Gumpper, August 1968. (Forthcoming)

Supplemental Labor Market Information as a Means to Increase the Effectiveness of Job-Search Activity, The Pennsylvania State University. by David W. Stevens, August 1968.

A Cost-Effectiveness Study of Vocational Education, The Pennsylvania State University. by Jacob J. Kaufman, Teh-wei Hu, Maw Lin Lee, and Ernst W. Stromsdorfer, October 1968. (Forthcoming)